

National Burn Center Reporting System Overview

The U.S. Consumer Product Safety Commission (CPSC) recently developed the National Burn Center Reporting System (NBCRS) in cooperation with the American Burn Association and Shriners Hospitals for Children.

The NBCRS is a surveillance system that collects data about clothing-related burn injuries to children under age 15 from the 105 U.S. burn centers that treat children. These incidents involve the ignition, melting or smoldering of clothing. CPSC enforces the Standard for the Flammability of Clothing Textiles (for general wearing apparel) and two Standards for the Flammability of Children's Sleepwear.

In its first NBCRS report, CPSC staff analyzed 209 incidents, involving 213 victims, associated with clothing-related burn injuries to children under 15 submitted by 44 burn centers from March 2003 to June 2004. Two children died from the burns. Three-quarters of the children were boys. The youngest child was two months old; the oldest was 14 years old.

Of the 209 reported incidents, 36 involved clothing worn at some time for sleeping. Most of the clothing worn for sleeping was daywear subject to the Standard for the Flammability of Clothing Textiles, but not subject to the flame resistance requirements of the Standards for the Flammability of Children's Sleepwear. Eight of the 36 incidents were believed to have involved traditional sleepwear garments subject to the children's sleepwear standards. Two of these eight garments were available for collection through the NBCRS and appear to comply with the federal standards for children's sleepwear.

The Standards for the Flammability of Children's Sleepwear are designed to protect children from burns by requiring that children's sleepwear be flame-resistant (FR). Amendments to the children's sleepwear standards in 1996 exempted tight-fitting children's sleepwear and infant garments sized 9 months or smaller from the FR requirements.

Overall findings from the NBCRS data include the following major points.

- Of the 213 victims, 179 were injured while wearing daywear. Shirts, pants and combinations of garments were most frequently involved in the incidents.
- No incidents appear to have involved tight-fitting children's sleepwear or infant garments sized 9 months or smaller.
- The most frequent ignition source was an outdoor fire, involved in 62 of the 209 incidents, followed by lighters in 37 of the incidents.
- More than one-half (107) of the 209 incidents involved flammable liquids. Boys, ages 10 to 14, comprised most of the victims. Many of these incidents were also associated with outdoor fires. Gasoline was the most frequently reported flammable liquid involved in these incidents.



U.S. Consumer Product Safety Commission
National Burn Center Reporting System
September 2004

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301-504-7403

This analysis was prepared by the CPSC staff, has not been reviewed or approved by, and may not necessarily reflect the views of, the Commission.

Executive Summary

The National Burn Center Reporting System (NBCRS) is a surveillance system designed to capture clothing-related burn injuries to children under 15 years old treated in burn centers in the United States.¹

Of the 105 burn centers in the United States that treat children, 92 agreed to participate in the NBCRS. During one full year of implementation, 44 burn centers submitted reports of children under 15 years old who were burned when their clothing ignited, melted or smoldered. The burn centers that agreed to participate in the NBCRS but did not report any incidents stated the reason for non-submission was that the burn center did not treat any cases within the scope of the data collection.

From March 2003 through June 10, 2004, 209 incidents were reported through the NBCRS involving children who were burned in clothing-related incidents.

Two hundred thirteen children were involved in the incidents, two of whom died as a result of the burn injuries. Three quarters of the involved children were males. The youngest child involved in the incidents was 2 months old and the oldest child was 14 years old, which was the age at which data collection stopped.

In 36 incidents, the children were injured while wearing clothing that was at some point worn for sleeping. The majority of these incidents, 19, involved daywear worn for sleeping. An additional three incidents involved children wearing daywear and either underwear or diapers.

Eight of the 36 clothing-worn-for-sleeping incidents involved sleepwear that appears to be subject to Standards for the Flammability of Children's Sleepwear. Amendments to the children's sleepwear standards in 1996 exempted tight-fitting children's sleepwear and infant garments sized 9 months or smaller from the requirements for flame resistance. There were no reports of incidents involving garments that appear to be tight-fitting children's sleepwear or infant garments sized 9 months or smaller.

One hundred forty-six of the 209 incidents involved clothing not worn for sleeping. Of these incidents, the most frequent scenario was a child playing with a lighter, followed by a child standing too close to an outdoor fire. The children injured in these incidents were most frequently burned when their shirt ignited.

Over half of the 209 incidents involved accelerants that were spilled on or near the ignition source or intentionally used with the ignition source. Most of the incidents involving accelerants were associated with outdoor fires including campfires, bonfires, trash fires and brush fires among other uncontained outdoor fires.

In summary, accelerants were a frequent factor in the incidents (107 of 209) reported in the first year of the NBCRS data. Items that appear to be subject to the children's sleepwear standards were reported as involved in 4 percent of the incidents (8 of 209) and there were no garments that appear to be either tight-fitting sleepwear or infant garments sized 9 months or smaller involved in the incidents.

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OVERVIEW

In response to inconsistencies in the reported number of clothing-related burn injuries to children, the Consumer Product Safety Commission (CPSC) in cooperation with the American Burn Association and Shriners Hospitals for Children developed the National Burn Center Reporting System (NBCRS). The NBCRS is designed to capture clothing-related burn injuries to children under 15 years old treated in U.S. burn centers.

This report analyzes the data from the first complete year of data collection through the NBCRS. Information about the victims, the scenarios of the incidents, and the types of clothing worn during the incidents is discussed.

This report also discusses the development of the NBCRS and details the history of the clothing textile and children's sleepwear flammability standards. The clothing involved in the incidents reported through the NBCRS, unless purchased by the consumer outside of the U.S., should comply with one of these standards.

BACKGROUND

I. FLAMMABILITY STANDARDS

A. General Wearing Apparel

i. Purpose

The Standard for the Flammability of Clothing Textiles (16 CFR Part 1610) is intended to reduce the danger of injury and loss of life by providing a national standard method of testing and rating the flammability of textiles and textile products for clothing, thereby discouraging the use of dangerously flammable clothing textiles. By setting requirements for three classes of flammability of clothing and textiles, the standard acknowledges that the most dangerously flammable fabrics are unsuitable for use in clothing because of their rapid and intense burning. The standard exempts most hats, gloves, footwear, and all interlining fabrics.

ii. History

In 1953 Congress enacted the Flammable Fabrics Act (FFA) and amended it in 1954 prohibiting the importation, manufacture for sale, or the sale in commerce of any article of wearing apparel, which is "so highly flammable as to be dangerous when worn by individuals." A test method first published by the Department of Commerce was used to make this determination.

In 1967, Congress amended the FFA, expanding its coverage and authorizing the issuance of flammability standards through rulemaking. The flammability standards from the 1953 Act were to remain in effect until superseded or modified through procedures specified in the 1967 amendment.

In 1972, the Consumer Product Safety Act (CPSA) was enacted transferring the authority to issue and amend flammability standards under the FFA from the Secretary of Commerce to the CPSC. In 1975, CPSC republished the FFA of 1953, as amended in 1954, at 16 CFR Part 1609 and the Standard for the Flammability of Clothing Textiles at

16 CFR Part 1610. In 1994, several amendments were made to remove footnotes about equipment manufacturer identification and clarifications were added for test procedures, equipment, interpretation of results and the use of alternate test equipment and criteria.

CPSC issued an Advance Notice of Proposed Rulemaking (ANPR) in September 2002 to update the standard to better reflect current consumer practices and technologies and to clarify several aspects of the standard. CPSC staff has reviewed public comments on the ANPR and is developing draft amendments for Commission consideration.

B. Children's Sleepwear

i. Purpose

The Standards for the Flammability of Children's Sleepwear (16 CFR Part 1615 and 16 CFR Part 1616) were designed to protect children from burns by requiring that children's sleepwear be flame resistant (FR). With these standards, children's sleepwear must self-extinguish if a flame from a candle, match, lighter or a similar small flame item causes it to catch fire. The sleepwear standards are not intended to protect children from burns during larger-scale fires such as structure fires, outdoor fires, or from fires involving flammable liquids.

ii. History

The children's sleepwear flammability standards were issued in the 1970's to address the unreasonable risk of injury or death to children from ignition and continued burning of sleepwear. The most common ignition scenarios involved children playing with matches and lighters. The most common garments ignited were traditional sleepwear—nightgowns, pajamas, and robes. The children's sleepwear flammability standards originally required that all sleepwear, sizes 0 to 14, be flame resistant (FR) as defined by a flammability test (16 CFR Part 1615 pertains to children's sleepwear sizes 0 to 6x and 16 CFR Part 1616 pertains to children's sleepwear sizes 7 to 14). Some fabrics are inherently flame resistant; cotton and other cellulosic fabrics require treatment with chemical flame retardants to be FR. Both children's sleepwear flammability standards require that test specimens self-extinguish following exposure to a small open-flame ignition source.

In 1991, CPSC initiated a review of the sleepwear standards to clarify the definition and interpretation of children's sleepwear. During the 1980's, there was an increased marketing of non-FR cotton garments (e.g., long underwear, daywear) that resembled sleepwear, but manufacturers claimed these were not sleepwear. Additionally, there was an increase in consumer demand for untreated cotton or other natural fiber sleepwear. As a result, the CPSC began rulemaking in November 1992 to ensure safer sleepwear choices for consumers.

On January 13, 1993, CPSC issued a stay of enforcement (58 FR 4078) of sleepwear requirements against garments used as sleepwear which were labeled and marketed as underwear if those garments were skin-tight or nearly skin-tight and garments that were essentially identical in design, material, and fit to such "underwear" requirements.

In September 1996, CPSC published amendments (61 FR 47633) that exempted sleepwear garments from the flammability requirements if they are (1) size 9 months or

smaller, or (2) tight-fitting (touch the body at seven key points).¹ The exemptions became effective in January 1997, but manufacturers reported design, production and marketing problems with the tight-fitting garments. Clarifying amendments (64 FR 2833) were published in February 1999 that gave measurement clarifications to ensure the feasibility of producing functional tight-fitting sleepwear.

In 1999, CPSC issued a requirement for mandatory labeling of tight-fitting sleepwear (64 FR 34533). Labels must include informative safety information on hang tags or packaging and permanent identifying labels in each garment.

II. National Burn Center Reporting System

A. Purpose and Scope

In previous years, there have been inconsistencies in the reported numbers of clothing-related burn injuries to children, and specifically differences in reported numbers of sleepwear-related burn injuries to children, among different organizations collecting such information. CPSC was receiving few sleepwear-related burn injury reports through its National Electronic Injury Surveillance System (NEISS). Other CPSC databases contained incident reports involving clothing, but these reports were received sporadically and were believed to be a fraction of all the clothing-related burn injuries to children under 15 years old in the nation.

In response to these differences in data and the potential underreporting through existing CPSC data collection programs, CPSC, with the support of the American Burn Association and Shriners Hospitals for Children, developed a reporting system to collect burn data.

The National Burn Center Reporting System (NBCRS) is a surveillance system designed to capture clothing-related burn injuries to children treated in burn centers in the United States. Specifically, the system collects comprehensive burn reports of incidents involving the ignition, melting or smoldering of clothing worn by children under age 15 from burn centers nationwide that treat children.

B. Recruitment

Contact with the burn centers was initiated as early as March 2003 and many burn centers began submitting incidents at that time. The official kick-off date for the NBCRS was designated as July 1, 2003, with all of the 105 burn centers that treat children having received information about the system at that time. Each eligible burn center was sent a recruitment package with a letter requesting participation, a description of the NBCRS, patient confidentiality information, the definition of a reportable case, a copy of the reporting form, and criteria for obtaining garments. In addition, the package included CPSC's Children's Wearing Apparel Investigation Guideline so the burn center personnel would be aware of the type of information that would be requested of the patients if they agreed to participate in the system. The guideline includes background information on the flammability standards, the purpose of the investigation, directions to the CPSC field investigator specific to the incident, and the questionnaire that the investigator is to administer to the patient's guardian. Continued personal contact by

¹ CPSC. "Final Amendments of Children's Sleepwear Standard." August 28, 1996.

CPSC staff was made with the directors of the burn centers in an effort to increase participation in the system. Additionally, the American Burn Association contacted their member burn centers to urge participation in the system. An incentive, paid by CPSC, of \$20 per reported incident and \$100 per incident to obtain the involved clothing was offered to the burn centers if needed to offset expenses.

Ninety-two of the 105 eligible burn centers have agreed to participate in the system. After one full year of implementation of the NBCRS, 44 burn centers have submitted incident reports involving clothing-related thermal burns to children under 15 years old. From January 2004 through June 2004, CPSC staff re-contacted those burn centers that had not submitted reports of incidents or that had initially submitted reports of incidents but had experienced an extended period of non-reporting. The burn centers responded that the reason for not submitting reports of incidents was because they had not seen any incidents fitting the definition of a reportable incident.

Eight burn centers have received incentives for reported incidents. The burn centers are using the incentive money towards resources for the children.

C. Assignment of Incidents

Included in the information packet was a reporting form that the burn centers were to use for incident submission to CPSC. If the burn center is treating a child involved in an incident meeting the reporting criteria (a child under 15 years old treated for a thermal burn injury after the clothing the child was wearing ignited, melted, or smoldered), the incident is to be recorded on the reporting form and submitted via the instructions on the form. Upon receipt of the incident reports, the cases are entered into CPSC's Injury and Potential Injury Incident (IPII) file with a document number to identify each case. After review of the reported information, if the incident meets the criteria for a reportable case, the incident is assigned for an in-depth investigation by CPSC field investigators.

Once the incident is assigned for an in-depth investigation, the field investigator contacts the patient's guardian (through contact information provided on the reporting form) or the burn center contact person within 48 hours of receiving the assignment for investigation. The purpose of this immediate contact is to increase the likelihood that the investigator will speak to the guardian before the patient is released from the burn center, as well as to secure the garment involved in the incident. At this time, the investigation will be completed by gathering all possible information from the patient, guardian, and medical professionals. The investigator will conduct an on-site investigation if the clothing that was involved is available for sample collection by CPSC. The investigator will conduct a telephone investigation if the garment is not available for sample collection. If there is no contact made with the patient's guardian or if the guardian does not wish to participate in the investigation, the investigation is terminated. The only information available about the incident in a terminated case is that which is available on the incident report submitted by the burn center. Some of the reported incidents occurred in another country but the victim was treated at a U.S. burn center. Reports of this nature are assigned for telephone investigation only and no effort is made to collect the garment.

METHODOLOGY

I. Retrieval of Incident Reports

NBCRS incidents have a unique Type of Contact within the CPSC databases. In general, the Type of Contact denotes the original source of a reported incident in the IPII database (medical examiner, newspaper, attorney, etc.). All NBCRS cases have a Type of Contact 59 (Burn Center Reporting System). To retrieve the cases for this annual review, the Type of Contact field was used to differentiate between NBCRS cases and other clothing-related burn incidents to children under 15 years old.

This document includes analyses of all NBCRS incidents reported to the Commission from the implementation of the program in March 2003 through June 10, 2004. By closing the data on this date, all incident reports could be assigned for investigation, acknowledged by the field and the investigations could be completed by June 30, 2004.

II. Classification of Incidents

The initial reporting form submitted by the burn centers gives some information about the victim, the injury and the scenario, limited as it may be. For the large majority of the incidents, investigations were completed and more detailed information was obtained about the incident, the victim, and the clothing involved. However, some cases were terminated for reasons given previously. Once the investigation was completed or terminated and the information reviewed, staff classified the incidents as out-of-scope, foreign country and in-scope. In total there were 268 incidents reported through the NBCRS during its first year of data collection.

A. Out-of-Scope

There were 30 out-of-scope incidents reported through the NBCRS. A case was considered out-of-scope if it did not fit the definition of a reportable case, that is, a child under 15 years old who received thermal burns after the clothing he was wearing ignited, smoldered or melted. Therefore, cases were out-of-scope if they involved a child older than 14 years or if clothing was not involved in the incident. Burn centers were instructed to submit a case if there were any questions about it fitting the definition. Appendix A contains a table of all out-of-scope incidents along with descriptive details about each incident.

B. Foreign Country

There were 29 incidents reported through the NBCRS that occurred in a foreign country, but the child was receiving treatment at a U.S. burn center. The majority of these incidents occurred in Mexico. The remaining incidents occurred in other South American and Central American countries and one incident occurred in the Marshall Islands. These incidents are collected through the NBCRS and investigated by telephone; however, they are not included in the analysis. Appendix B contains a table of all Foreign Country incidents along with descriptive details about each incident.

C. In-Scope

There were 209 in-scope cases that occurred in the U.S. These incidents include all completed and terminated investigations that were both in-scope (involved children under 15 years old who received thermal burns after clothing ignited, melted or smoldered) and occurred in the U.S. Terminated investigations are used for analysis, as the incident report submitted by the burn center contains information about the victim, garment involved, and incident scenario. The details of the incident are not known, but since key information is available, it is appropriate to use the data. Appendix C contains all of the in-scope incidents used in the analysis.

RESULTS

I. Overall Results

After one full year of data collection, CPSC has received 209 in-scope reported incidents through the NBCRS. Four of these incidents involved two children and thus the number of victims injured or killed is 213. Additionally, one incident involved two garments – one worn for sleeping and the other not worn for sleeping. Because this report discusses information about the incidents, the victims and the classification of the garments with respect to whether the garment was worn for sleeping, some tables refer to the 209 incidents (Tables 1, 2, 3, 4, and 6), others refer to the 213 victims (Tables 5 and 6) and others refer to the 214 garments (Table 6) classified according to the use for sleeping.

Two of the 213 children died as a result of the burn injuries incurred during the incident. One 7-year-old girl died when she was playing with matches in her bedroom and caught the bedding on fire. The girl, who was wearing a t-shirt, sweatshirt and underpants (not worn for sleeping), received 83 percent total body surface area burns as a result of the incident. A 7-year-old boy died when he was imitating his father and put lighter fluid on an already-lit grill. The grill flared up catching the boy’s clothing on fire. Information about the clothing is unknown. The boy received 90 percent total body surface area burns as a result of the incident.

Eleven-year-old children were most frequently involved in the incidents followed by 13-year-old children. The youngest child was 2 months old and was being held by a relative when propane from a stove reached a candle flame and flashed towards the victim. Over three-quarters of the children injured were males. Table 1 shows the number of male and female children by year-age of the children. The most frequently treated children were 11-year-old boys.

**Table 1. Age and Sex of Victims
(In-Scope Incidents)**

	Age (Years)															Total
	<1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Male	3	0	4	10	13	7	7	14	9	9	14	25	10	23	15	163
Female	1	3	3	5	5	7	2	7	2	0	5	1	4	2	3	50
Total	4	3	7	15	18	14	9	21	11	9	19	26	14	25	18	213

Source: National Burn Center Reporting System (2004).

Accelerants were frequently involved in the incidents. One hundred seven of the 209 incidents were reported to have involved accelerants that were spilled in or toward a fire or intentionally used in a fire. In an additional seven incidents, a flammable substance was unknowingly present in the fire (batteries, paint cans), was used as fuel for the fire (sterno, oil lamp/candle), or leaked into the area of the fire (propane leaks). A more detailed discussion of flammable liquids is in Section V of this document.

Table 2 shows the activities of the children preceding the incident and Table 3 shows the ignition source that caused the injuries. A review of both the activities of the children and the ignition source together shows that the most frequent cause of injury was children playing with lighters. Appendix D has a full table of activity and ignition source. Table 4

shows the five most frequently seen activity/ignition source combinations and how many of the incidents involved accelerants.

**Table 2. Activities of Victims Preceding Incidents
(In-Scope Incidents)**

Activity of Victim	Number of Incidents
Playing with ignition source	57
Close to ignition source	53
Starting or stoking fire	26
Accidental contact with ignition source	24
Another person ignited victim's clothing	8
Ignition source fell on or struck victim	7
Trying to put out fire	7
Fell on ignition source	6
Spilled flammable liquid which started fire	4
Using ignition source	3
Other	8
Unknown	6
Total Number of Incidents	209

Source: National Burn Center Reporting System (2004).

**Table 3. Ignition Source Involved in Incidents
(In-Scope Incidents)**

Ignition Source	Number of Incidents
Outdoor fire	62
Lighter	37
Candle	18
Structure fire	13
Stove/range	13
Matches	10
Fireworks/firecrackers	8
Container fire	4
Explosion	4
Fireplace	4
Heater	3
Grill	3
Hot water heater	3
Lawn equipment	3
Product set on fire (balls, towel)	3
Cigarette	2
Halogen lamp	2
Other	8
Unknown	9
Total Number of Incidents	209

Source: National Burn Center Reporting System (2004).

Table 4. Five Most Frequently Reported Activity/Ignition Source Combinations and Accelerant Involvement during Incidents (In-Scope Incidents)

Activity and Ignition Source	Accelerant Involvement	Number of Incidents
Playing with lighter	No accelerant	18
	Accelerant	8
Close to an outdoor fire	No accelerant	6
	Accelerant	19
Starting or stoking an outdoor fire	No accelerant	0
	Accelerant	16
Close to a structure fire	No accelerant	10
	Accelerant	2
	Unknown	1
Accidental contact with a candle	No accelerant	10
	Accelerant	1
Total of Five Most Frequent Activity/Ignition Source Combinations	No accelerant	44
	Accelerant	46
	Unknown	1
	Total	91

Source: National Burn Center Reporting System (2004)

Appendix E shows a table of the ages of the children and the activity preceding the incident. Four and 5-year-old children playing with the ignition source were the most common age and activity combination (eight incidents for each age group) followed by 11-year-old children playing with the ignition source and starting/stoking the fire (seven incidents for each scenario).

In each of the incidents, at least one article of clothing was burned. The garments involved in the incidents ranged from burned socks (grouped with other) to costumes to sleepwear or a combination of multiple articles of clothing. Table 5 shows a list of garments involved and the frequency with which they were involved. Most of the reports involved the ignition of multiple garments. Note the table totals 213 because this is a count of the clothing worn by the victims and there were 213 victims in the 209 incidents.

**Table 5. Type of Clothing Worn by Victim that Ignited During Incidents
(In-Scope Incidents)**

Type of Clothing	Number of Victims Wearing Garment
Combination of multiple garments	66
Shirt	63
Pants	45
Sleepwear	10
Outerwear	6
Dress	4
Costume	2
Skirt	1
Other	9
Unknown	7
Total Number of Garments	213

Source: National Burn Center Reporting System (2004).

On both the reporting form and in the investigation, questions were asked as to whether the garment(s) involved in the incident was worn for sleeping. If the report stated that the garment was ever worn for sleeping, it is discussed along with garments intended for sleeping. Table 6 shows how many of the garments were worn for sleeping. Note the table totals 214 because one victim was burned while wearing a combination sweater and shirt. The report stated the shirt was worn for sleeping and the sweater was not worn for sleeping. Therefore the garments for this victim were split between categories. In all other incidents with a combination of multiple clothing, there was no distinction as to whether some of the garments were worn for sleeping while others were not.

Table 6. Classification of Clothing Worn by Victims that Ignited During Incidents (In-Scope Incidents)

Garment Classification	Number of Incidents	Number of Victims
Total	209 (Note: Column total is 210 as one incident is double counted because of the description of the garments involved.)	213 (Note: Column total is 214 as one victim is double counted because of the description of the garments involved.)
Clothing Worn for Sleeping	36 *	36 *
- daywear only	19 *	19 *
- sleepwear (subject to FR requirements of the CFR)	8	8
- sleepwear (not subject to FR requirements of the CFR)	4	4
- other garment only	1	1
- combination of garments worn for sleeping	3	3
- unknown	1	1
Clothing Not Worn for Sleeping	146 * †	150 * †
Unknown if Worn for Sleeping	28	28

Source: National Burn Center Reporting System (2004).

* The incident/victim which is double counted is included in these counts. In the incident the one victim was wearing a t-shirt (daywear) sometimes worn for sleeping and a sweater (daywear) not worn for sleeping.

† In four of the 146 incidents, two victims were injured during the incident. Therefore, 150 victims were injured in 146 incidents.

Each of the categories in Table 6 is discussed in detail below.

II. Clothing Worn For Sleeping

There were 36 incidents reported through the NBCRS that involved clothing worn for sleeping. Each incident involved only one child, thus 36 victims. The children involved in the incidents ranged in age from 2 months old to 13 years old. Seven-year-old children (five males and three females) were most frequently involved in the incidents. Eleven of the 36 incidents included children involved in structure fires – this was the most frequently reported activity and ignition source combination. With many fewer incidents, children close to an outdoor fire and children playing with a lighter were the next most frequently reported scenarios at three reports each. Accelerants were involved in six of the 36 incidents.

A. Daywear

Nineteen of the incidents involved daywear that was noted by the caregiver as used for sleeping. Five incidents involved two separate garments, thus a total of 24 garments were involved in the 19 incidents.

Seven-year-old males were most frequently involved in the incidents involving daywear used for sleeping. The five 7-year-old males were injured in the following ways: 1) involved in a house fire; 2) tossed a birthday candle when it got too hot; 3) accidentally contacted a stove/range; 4) had a candle fall on him while sleeping; and 5) playing with a

lighter. Table 7 shows a breakdown of the age and sex of the children involved in the daywear-used-for-sleeping incidents.

**Table 7. Age and Sex of Victims
(Daywear-Used-for-Sleeping Incidents)**

	Age (Years)															Total
	<1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Male	0	0	0	1	1	0	1	5	2	0	1	0	2	1	0	14
Female	0	0	0	1	0	1	1	1	0	0	1	0	0	0	0	5
Total	0	0	0	2	1	1	2	6	2	0	2	0	2	1	0	19

Source: National Burn Center Reporting System (2004).

Whereas 51 percent (107/209) of all the in-scope incidents involved accelerants, only six of these 19 daywear-used-for-sleeping incidents involved accelerants. The accelerants were involved in three outdoor fires; a container fire, starting a grill, and a structure fire.

The incidents involved daywear that was reported to have been worn for sleeping by the victim at some point in time, not necessarily at the time of the incident. In only two of the incidents, the victim was reported as sleeping at the time of the incident. It is possible that another incident involved children who were sleeping at the time of the large structure fires, however the information in the investigation does not specifically state the children's actions at the time of the incident. Shirts were the most common daywear-used-for-sleeping garments involved in the incidents. Table 8 shows the number of victims with each type of garment or combination of garments involved.

**Table 8. Types of Garments Worn by Victims during Incidents
(Daywear-Used-for-Sleeping Incidents)**

Type of Clothing	Number of Victims Wearing Garments
Shirt	11
Shirt and Pants	5
Pants	2
Dress	1
Total Number of Victims	19

Source: National Burn Center Reporting System (2004).

Table 9 shows all scenarios (activity and ignition source combinations) for the 19 incidents with children wearing daywear worn for sleeping.

**Table 9. Activity/Ignition Source Combination during Incidents
(Daywear-Used-for-Sleeping Incidents)**

Scenario	Number of Incidents
Close to structure fire	3
Close to outdoor fire	2
Playing with a lighter	2
Starting/stoking outdoor fire	2
Other activity with candle	2
Accidental contact with candle	1
Accidental contact with heater	1
Accidental contact with stove/range	1
Candle fell on victim	1
Other person ignited victim's clothing with lighter	1
Playing with container fire	1
Starting/stocking grill	1
Using stove/range	1
Total Number of Incidents	19

Source: National Burn Center Reporting System (2004).

B. Sleepwear Subject to FR Requirements of 16 CFR Part 1615 and 16 CFR Part 1616

There are multiple categories of sleepwear that are subject to the FR requirements of the federal standards for children's sleepwear. The first category is traditional sleepwear and includes pajamas, nightgowns and bathrobes. Unless excluded by the 1996 amendments, these garments must be FR under the standard. Secondly, infant garments (sized 9 months or smaller) made before January 1997 should be FR as it was subject to the flammability portion of the standard (infant sized garments made after January 1997 are discussed later). Lastly, there is a category for homemade sleepwear made of particular fabrics subject to the standard. The children's sleepwear standards require that fabric intended or promoted, and sold, for use in children's sleepwear must comply with the flammability portion of the children's sleepwear standards. If the homemade sleepwear garment did not enter into commerce, the garment itself is not subject to the standard, but the *fabric* of the garment is subject to the standard (because the fabric has entered into commerce for use as sleepwear). If the homemade sleepwear garment did enter into commerce, the *garment* must comply with the FR requirements of the standards. Each of these three categories of children's sleepwear subject to the FR requirements of the standards at 16 CFR Part 1615 and 16 CFR Part 1616 is discussed individually below.

Eight incidents were reported through the NBCRS that involved sleepwear that appears to be subject to the federal standards. Ten garments burned in the eight incidents.

i. Traditional Sleepwear that Must Be Flame Resistant

Traditional sleepwear includes pajamas, nightgowns and bathrobes. Such garments are subject to the children's sleepwear standards and thus must be FR. For many of the incident reports, specific information about the size and fit of the sleepwear garment was not available. In these incidents, staff classified the sleepwear garment as traditional sleepwear based on the description of the garment and the behavior of the garment

when subjected to the flame source. By including these incidents with vague garment description, the number of traditional sleepwear garments presented is a maximum number of traditional sleepwear garments involved in burn incidents.

All eight incidents involved what appears to be traditional sleepwear subject to the flammability standards and that sleepwear should be FR. The children ranged in age from 2 months to 12 years. An accelerant was involved in one incident by the direct actions of the victim. Three children were injured because they were close to the ignition source, two children accidentally contacted the ignition source, one child was playing with the ignition source, one child was stoking a fire, and one child tossed a blanket that contacted a halogen lamp. These incidents are discussed in detail below.

Close to Fire

- A 2-month-old male was in the arms of a relative who was standing near a propane stove. The relative lit a candle and the propane caused a flash and fire that contacted the victim and the relative. A trailer fire resulted. The victim was wearing polyester one piece pajamas, sized 6-12 months. The garment was reported to smolder but did not ignite. The child was burned on the face but not on the parts of his body covered by the sleepwear. The size of the garment suggests that it be classified as traditional sleepwear. As the garment's size range includes sizes larger than 9 months, it is not exempt from the FR requirements of the sleepwear standard. CPSC staff collected the garment for analysis. Staff examined the garment and it appears to comply with 16 CFR Part 1615.
- A 4-year-old male was involved in a house fire caused by a propane gas wall-mounted heater that overheated. The family was sleeping at the onset of the fire and was found at the door after trying to get out of the house. The child was stated to be wearing pajamas, but no further information about the pajamas was available. The pajamas had soot on them but were stated to not have ignited. The boy received 8 percent total body surface area burns. There was no sample for this incident, thus staff could not examine the garment for an indication of compliance to a standard. The description and behavior of the garment suggest that it be classified as traditional sleepwear.
- A 9-month-old male was lying on a blanket on the floor with his 3-year-old sibling. The sibling was playing with matches and dropped one on the blanket. The victim tried to get away from the resulting fire. The victim was wearing a sleeper of unknown material and size. The sleeper melted at the points of contact with the flame. The boy received second degree burns to his thigh, forearm and hand. He received a total of 5 percent total body surface area burns. There was no sample for this incident, thus staff could not examine the garment for an indication of compliance to a standard. The description and behavior of the garment suggest it be classified as traditional sleepwear.

Accidental Contact

- A 12-year-old male stumbled into a stove and his pajamas caught fire. The material and size of the pajamas are unknown. The investigation was terminated and little information is available. The extent of the boy's injuries is unknown. There was no sample for this incident, thus staff could not examine

the garment for an indication of compliance to a standard. The description of the garment suggests it be classified as traditional sleepwear.

- A 7-year-old female brushed against a space heater and the bathrobe and nightgown she was wearing melted and ignited. The material and size of the two garments are unknown. The child received second and third degree burns with 27.5 percent total body surface area burned. There was no sample for this incident, thus staff could not examine the garment for an indication of compliance to a standard. The description of the garments suggest they be classified as traditional sleepwear.

Playing with Ignition Source

- A 12-year-old female was playing with a cigarette lighter and her nightgown ignited. The material and size of the garment are unknown. The victim received second and third degree burns to 15 percent of her body. There was no sample for this incident, thus staff could not examine the garment for an indication of compliance to a standard. The description of the garment suggests it be classified as traditional sleepwear.

Stoking Fire

- A 12-year-old male and his sibling were standing near a wood stove with a fire that was smoldering. The victim poured gasoline on the smoldering fire and the fire flared up towards the victim. His pajama pants and the cuffs of the pajama top burned. The garments were reportedly made of a cotton/polyester blend, were size 14 and loose fitting. He received second and third degree burns to 15 percent of his body. There was no sample for this incident, thus staff could not examine the garment for an indication of compliance to a standard. The description of the garment suggests it be classified as traditional sleepwear.

Other

- A 4-year-old female was sitting in a chair throwing her blanket and stuffed animal into the air. The blanket landed on top of the halogen lamp behind the chair and ignited. The blanket then fell on the victim sitting in the chair. The burning material scorched her hair and foot and a section of the nightgown she was wearing. The garment did not ignite further. The fire then spread to the house. The child received minor burn injuries. CPSC staff collected the garment for analysis. The description and behavior of the garment suggest it be classified as traditional sleepwear. Staff examined the garment and it appears to comply with 16 CFR 1615.

In addition to these eight incidents, there were two other incidents reported through the NBCRS that involved sleepwear, but have been categorized as out-of-scope because the clothing did not ignite, melt, or smolder. Although staff does not know the reason the sleepwear garments did not burn, it is possible that the garments did not burn because of the fiber content or treatment of the fabric. In one incident, two children ages 9 and 10, were watching television when friction caused a spark that ignited leaking propane causing a large explosion. The children were both wearing pajamas consisting of cotton shirts and flannel shorts. Both children received burns on the skin not covered by the garments, but the garments did not ignite. In the second incident, a 7-year-old child who

is paralyzed in her legs crawled next to a space heater. The heat caused burns to the child's legs, but the pajamas she was wearing did not ignite.

ii. Infant Sleepwear Made Before the January 1997 Exclusion

There were no incidents reported through the NBCRS involving sleepwear garments size 9 months or smaller manufactured before January 1, 1997.

iii. Homemade Sleepwear of Fabric Subject to Standards

There were no incidents reported through the NBCRS involving homemade sleepwear garments made from fabric intended to be used for children's sleepwear. Additionally there were no reported incidents involving homemade sleepwear that entered into commerce and thus subject to the flammability portion of the children's sleepwear standards.

C. Sleepwear Not Subject to FR Requirements of 16 CFR Part 1615 and 16 CFR Part 1616

Whereas most sleepwear for children, such as pajamas and nightgowns, is subject to the children's sleepwear flammability standards, there are some categories of sleepwear for which the garments are not subject to the FR requirements of the standards. The first such category includes garments manufactured from January 13, 1993 through March 9, 1998 that fell under the stay of enforcement (58 FR 4078). An example of this type of garment is long underwear with dimensional restrictions (skin-tight). The second category includes infant sleepwear garments sized 9 months or smaller made after January 1997. These garments were exempted from the FR portion of the standard by the 1996 amendments. The third category of children's sleepwear garments not subject to the FR requirements is tight-fitting garments. Tight-fitting garments are those that meet the measurement requirements prescribed in the 1996 amendments. The fourth category includes homemade sleepwear manufactured from fabric not subject to the standard. If the fabric from which the sleepwear was made was not intended to be used for sleepwear, then the fabric does not have to comply with the children's sleepwear standards. The fifth category includes diapers and underwear. These garments have never been subject to the FR requirements of the children's sleepwear standards (i.e., diapers and underwear were not part of the 1996 amendments).

These categories of children's sleepwear not subject to the FR requirements of the children's sleepwear standards are discussed individually below. Additionally, staff has included discussion of other sleepwear not subject to the children's sleepwear standards because the garment was an adult size garment.

There were four incidents reported through the NBCRS involving children under 15 years old burned while wearing sleepwear not subject to the FR requirements of the children's sleepwear standards.

i. Stay of Enforcement Garments

Garments subject to the stay of enforcement would be garments used as sleepwear but marketed as underwear with limited dimensional restrictions. There were no reports of children burned while wearing garments subject to the stay of enforcement.

ii. Excluded Infant Size Garments

Garments excluded from the sleepwear standards are those infant size garments sized 9 months or smaller manufactured after January 1, 1997. There were no reports of incidents involving children burned while wearing garments sized 9 months or smaller.

iii. Tight-Fitting Sleepwear Made After January 1997

There were no incidents reported through the NBCRS that appeared to have involved tight-fitting sleepwear garments manufactured after January 1, 1997.

iv. Homemade Sleepwear from Fabric Not Subject to the Standards

One incident involved a 7-year-old girl who was burned in a homemade nightgown when she reached across an oil lamp/candle while praying. The armpit of the nightgown contacted the flame and the girl received burn injuries to her chest and arm. The cotton material from which the nightgown was made was purchased in India and brought to the U.S. by the child's grandmother.

v. Diapers and Underwear

Two incidents were reported through the NBCRS that involved young children wearing diapers. In the incidents, a 23-month-old victim and a 3-year-old victim were burned in house fires while wearing only diapers. The 23-month-old victim was burned over 51 percent of her body. The 3-year-old victim was burned over 74 percent of her body in locations not covered by the diaper. Accelerants were not involved in either incident.

vi. Adult Size Sleepwear

One incident involved a 13-year-old male who was standing close to a campfire burning inside of a tire rim. An ember came out of the fire and ignited the boy's pants. The pants were cotton flannel and were an adult size medium. There were no flammable liquids involved in this incident. The boy received third degree burns to his leg and fingers.

D. Other Garments Worn for Sleeping

One incident was reported through the NBCRS in which the child was wearing another type of clothing other than daywear or sleepwear. The incident involved a child wearing an adult slip for sleeping. The 11-year-old female had an accident in her bed and changed clothing into the adult slip to return to bed for the night. During the night, a house fire occurred when a blanket contacted a space heater. The victim was burned over 25 percent of her body. Accelerants were not involved in this incident.

E. Combination of Garments Worn for Sleeping

Three incidents were reported through the NBCRS in which the child was wearing a combination of types of garments.

In two incidents, the children were each wearing a shirt (daywear) and a diaper. In one of these incidents, a 12-year-old (autistic child) got confused during a house fire and did

not know how to exit the home. The other of the two incidents involved a 4-month-old child in a crib during a house fire.

There was one report in which a child was wearing cotton daywear and cotton underpants when she was burned. A candle burning in a bedroom was knocked over during the night, igniting the bedding. The fire was contained to the bedroom. The victim received burn injuries to 86 percent of her body.

F. Unknown Garment Worn for Sleeping

One incident was reported through the NBCRS in which a 6-month-old child was involved in a house fire that began in her bedroom. The child was sleeping in a crib, thus the garment was used for sleeping. However, any further information about the garment is unknown. The victim suffered burns over 30 percent of her body. Accelerants were not involved in this incident.

III. Clothing Not Worn for Sleeping

There were reports of 146 incidents of children burned while wearing clothing not worn for sleeping. Four of the incidents involved two children who were burned, thus a total of 150 children were burned wearing clothing not worn for sleepwear. Eleven-year-old males were most frequently involved in these incidents, followed by 13-year-old males. Table 10 is a breakdown of the ages and sexes of the children injured while wearing clothing not worn for sleeping.

**Table 10. Age and Sex of Victims
(Clothing Not Worn for Sleeping)**

	Age (Years)															
	<1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Total
Male	0	0	3	7	9	5	5	9	7	8	12	21	5	19	14	124
Female	0	0	1	4	4	6	1	1	2	0	3	0	1	0	3	26
Total	0	0	4	11	13	11	6	10	9	8	15	21	6	19	17	150

Source: National Burn Center Reporting System (2004).

The type of clothing most frequently worn during the incidents was a shirt (49), followed by a combination of multiple garments of clothing (46). Table 11 shows the breakdown of the types of clothing worn by the 150 victims.

**Table 11. Types of Garments Worn by Victims during Incidents
(Clothing Not Worn for Sleeping)**

Type of Garment	Victims Wearing Type of Garment
Shirt (includes all tops)	49
Combination of clothing	46
Pants (includes all bottoms)	39
Dress	3
Outerwear	3
Costume	2
Coveralls	2
Skirt	1
Other	3
Unknown	2
Total Number of Victims Wearing Garments	150

Source: National Burn Center Reporting System (2004).

Of the 146 incidents, the most frequent activity and ignition source combinations were children playing with a lighter (22, 7 involving a flammable liquid), children standing too close to an outdoor fire (20, 17 involved a flammable liquid), and children starting or stoking an outdoor fire (13, all 13 involved a flammable liquid). All other activity and ignition source combinations had seven or fewer incidents. Appendix F is a full table with all activity and ignition source combinations. A total of 85 of the 146 incidents involved flammable liquids. More discussion of incidents involving flammable liquids is in Section V.

IV. Unknown if Clothing was Worn for Sleeping

There were 28 incidents reported through the NBCRS in which it is unknown whether the garment damaged during the incident was ever worn for sleeping. Each incident involved one victim, thus 28 children were injured in these incidents. There was not one particular age group that contained the most incidents. The distribution of victims across these incidents was fairly uniform. Table 12 shows a breakdown of age and sex of the children involved in incidents in which the use of the garment for sleeping is unknown.

**Table 12. Age and Sex of Victims
(Unknown if Clothing Worn for Sleeping)**

	Age (Years)															Total
	<1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Male	0	0	1	1	2	2	1	1	0	1	1	4	0	2	1	17
Female	0	2	1	0	0	0	0	3	0	0	1	0	2	2	0	11
Total	0	2	2	1	2	2	1	4	0	1	2	4	2	4	1	28

Source: National Burn Center Reporting System (2004).

Most frequently, the garments were a combination of multiple items of clothing (11). Shirts were involved in five incidents, pants were involved in four incidents, and outerwear was involved in three incidents. One incident involved a sock and there was no information on the garments in the remaining four incidents.

With so few incidents, it is difficult to suggest the most frequent activity and ignition source combination. Table 13 shows all activity and ignition source combinations for these 28 incidents.

**Table 13. Activity and Ignition Source Combination during Incidents
(Unknown if Clothing Worn for Sleeping)**

Activity and Ignition Source	Number of Incidents
Accidental contact with candle	3
Falling into outdoor fire	3
Close to an explosion	2
Playing with matches	2
Putting out an outdoor fire	2
Close to an outdoor fire	2
Accidental contact with stove/range	2
Starting or stoking an outdoor fire	1
Starting/stoking container fire	1
Close to matches	1
Other person lit victim with lighter	1
Playing with lighter	1
Starting/stoking grill	1
Starting/stoking a fire using a match	1
Other person lit victim by arson	1
Playing with outdoor fire	1
Close to structure fire	1
Playing with unknown source	1
Unknown	1
Total Number of Incidents	28

Source: National Burn Center Reporting System (2004).

The most common ignition source for these incidents, combining all activities associated with each ignition source, was an outdoor fire. Of the 9 incidents involving an outdoor fire, four involved a flammable liquid. In total, 15 of the 28 incidents involved a flammable liquid.

V. Flammable Liquid Involvement

As previously stated, 107 of the 209 in-scope incidents reported through the NBCRS in its first year involved flammable liquids spilled or poured on or near an ignition source. In three incidents, two children were burned, thus 110 children were injured in the 107 incidents involving flammable liquids. The victims in these incidents ranged from 1 year old to 14 years old with the children most frequently involved being 11 years old. One hundred of the 110 injured children were males. Table 14 shows the age and sex of the victims injured in incidents involving flammable liquids.

**Table 14. Age and Sex of Victims
(Incidents Involving Flammable Liquids)**

	Age (Years)															Total
	<1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Male	0	0	3	3	2	2	5	6	4	5	10	21	6	19	14	100
Female	0	1	0	2	0	1	0	1	0	0	2	0	2	1	0	10
Total	0	1	3	5	2	3	5	7	4	5	12	21	8	20	14	110

Source: National Burn Center Reporting System (2004).

Gasoline was the most frequently reported flammable liquid involved in the incidents. Lighter fluid was the second most frequently involved. Sixty-seven incidents involved only gasoline, an additional four incidents involved a gasoline and oil mixture, one incident involved gasoline and diesel fuel and one incident involved gasoline and lighter fluid. Thus a total of 73 of the 107 incidents involved gasoline. Table 15 shows the different flammable liquids and substances that were involved in the incidents. The flammable substances are broken down into fuel and automotive products and general household products.

**Table 15. Flammable Substance Involved in Incidents
(Incidents Involving Flammable Liquids)**

Flammable Substance	Number of Incidents
Fuel and Automotive Products	88
Gasoline	67
Lighter fluid	9
Oil and gasoline	4
Carburetor fluid	1
Chainsaw fuel	1
Diesel fuel and gasoline	1
Gunpowder	1
Kerosene	1
Lighter fluid and gasoline	1
Model airplane fuel	1
Torch fuel	1
General Household Products	13
Spray paint	3
Perfume	2
Cleaning solvent	1
Cooking alcohol	1
Glue	1
Hairspray	1
Insect repellent	1
Lemon extract	1
Paint thinner	1
Rubbing alcohol	1
Unknown Substance	6
Total Number of Incidents	107

Source: National Burn Center Reporting System (2004).

Flammable liquids were most frequently involved in incidents with outdoor fires. Outdoor fires include campfires, bonfires, trash fires and brush fires among other uncontained outdoor fires. Table 16 gives the types of ignition source for the 107 incidents involving flammable liquids.

**Table 16. Ignition Source in Incidents Involving Flammable Substances
(Incidents Involving Flammable Liquids)**

Ignition Source	Number of Incidents
Outdoor fires	47
Lighter	17
Matches	5
Container fire	4
Fireplace	4
Explosion	3
Grill	3
Hot water heater	3
Lawn equipment	3
Cigarette	2
Product on fire	2
Structure fire	2
Candle	1
Stove/Range	1
Other	6
Unknown	4
Total Number of Incidents	107

Source: National Burn Center Reporting System (2004).

DISCUSSION

The NBCRS was developed as a tool to gather more comprehensive data on children's clothing-related burn injuries and especially to assess the prevalence of sleepwear-related burn injuries to children. During the first year of data collection, 44 hospitals submitted a total of 268 incidents, 209 of which involved incidents of children under 15 years old burned when the clothing they were wearing ignited, melted, or smoldered and occurred in the U.S. Eight of the 209 in-scope incidents involved sleepwear garments subject to the children's sleepwear flammability standards. There were no incidents reported through the NBCRS that appeared to have involved tight-fitting sleepwear or infant garments sized 9 months or smaller.

Outdoor fires were the most frequently reported ignition source (62 of 209). When looking at the five most frequently reported activity/ignition source combinations (summing to 91 incidents), outdoor fires constitute 41 of the 91 incidents. Outdoor fires were most frequently associated with flammable liquids, also.

A review of all incidents showed that accelerants involvement is a prevailing problem. Over half (107 of 209) of the in-scope incidents involved flammable liquids that were spilled in or near the ignition source or intentionally used with the ignition source. Gasoline was the most frequently reported flammable liquid involved in the incidents.

Appendix A

This appendix contains out-of-scope incidents reported through the National Burn Center Reporting System from March 2003 through June 10, 2004. The incidents involve children 15 years old or older or incidents in which clothing did not ignite, melt, or smolder.

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
1	X0352186A 031023HCC2038	5/6/2003	15	M	The victim was involved in a burn incident, but the age of the victim at the time of the incident puts this out of scope.	Pants, Shoes	Unknown
2	B0420152A 040301HCC3193	5/25/2003	2	F	The patient fell into a campfire and received burns to hand and arms. The clothing did not catch on fire as stated by the burn center on the termination report.	None	No
3	B03B0019A 031117HCC2097	6/25/2003	6 mos.	F	The victim received scald burns when hot water was spilled on her shoulder. There was no clothing involved.	None	N/A
4	B03B0013A 031209HCC2172	7/6/2003	10	M	The victim was playing near a fire pit. He fell into the fire and received burns to his elbow and knee. The clothing did not ignite and did not play a part in the injuries.	None	N/A
5	X0452450A	7/31/2003	14	M	The victim was making fireworks out of gun powder. He received 3% total body surface area flash burns to his face. No clothing was mentioned in the report.	None	N/A
6	X0383932A 030827HCC2633	8/1/2003	9 mos.	M	The victim's parent plugged in a deep fryer in the kitchen and the child was in his walker. The victim went into the kitchen and pulled the appliance down and the hot oil spilled onto him. He was wearing only a diaper. He received burns to his face, arms, chest and upper thighs.	None	No
7	B0420155A	8/8/2003	16	F	The victim was making candles on the stove and the mixture caught on fire, igniting shirt. The victim was too old to be included in analysis.	Shirt	No
8	B03B0012A 031118HCC2103	8/25/2003	4, 3	F, F	Two sisters were involved in a plane crash. Both children were wearing cotton t-shirts and shorts. The clothing did not burn. It was intact at the time of the crash.	None	N/A

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
9	X03A4906A 031023HCC2036	10/19/2003	9	F	The victim ignited a pile of trash with a lighter after it had been doused with gasoline and oil. She received 2nd degree burns to arms and legs, but no clothing caught fire.	None	Unknown
10	X03A4981A 031027HCC2042	10/23/2003	3	F	The victim and her family were involved in an electrical house fire. The clothing did not burn, ignite, melt, etc. The burns were a result of the heat in the room that the girl was in. It is believed that the garment protected her.	None	Yes
11	B0420158A	10/29/2003	15	M	A friend poured gasoline onto a fire and it exploded onto the victim. The age of the victim makes this case out of scope.	Pants	No
12	B03C0076A 031217HCC1248	11/10/2003	14	M	Victim was releasing butane fuel from a butane cylinder and then ignited it by lighter which in turn ignited gas in a coffee can. He tried to stomp out the flame and the flames went around the boot on the inside of his pants. The clothing did not ignite or melt. Only the sole of the boots were affected.	Boots	No
13	B03C0063A	11/21/2003	12 mos.	F	Mother was going to bathe the child. She filled a container with hot water, turned around and the child fell into the container. The child received scald burns. No clothing was involved.	None	N/A
14	B03B0031A 031128HCC1196	11/24/2003	9	M	The victim got an aerosol paint can from the garbage and threw it on burning leaves. He then went to get the can after realizing the danger and the can exploded, burning his face from his nostrils to his chin. Clothing was not involved.	None	N/A
15	B03C0082A 031216HNE1164	12/14/2003	6, 10	M, F	Two children died (as did their mother) when a candle lit a futon/sofa and caught an attic apartment on fire. They died from smoke inhalation, with minor burns noted. No mention of clothing ignition.	None	N/A

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
16	B03C0086A 031222HCC2201	12/18/2003	10	F	The victim's mother and two brothers were lighting a fire in the fireplace with gasoline and an explosion occurred. Child received burns to face, neck, arms. No clothing was involved.	None	N/A
17	B03C0089A 031229HCC1294	12/24/2003	12	M	During an outdoor fire the victim poured lighter fluid onto the fire. An explosion occurred and the victim received flash burns to his face. Clothing not involved.	None	Unknown
18	B03C0090A	12/24/2003	7	F	The victim was burned by the heat from a space heater as she crawled by. She is paralyzed in her legs. She could not feel heat source. Clothing did not burn.	None	Yes
19	B03C0096A 040105HCC2243	12/29/2003	7	F	The victim died as a result of house fire allegedly set by the mother. She was burned on 21% of body and died of anoxia. She was burned on the arms, legs, hands, face. Clothing did not burn.	None	Yes
20	B0410121A 040130HCC3167	12/30/2003	9, 10	F, M	Children were lying on the bed when an explosion of fire came from the next room. The children were burned on places not covered by the pajamas they were wearing. The clothing did not melt or burn, and was only dirty because the kids went into a mud puddle. Clothing was in condition to be worn again.	None	Yes
21	B0410106A 040112HCC2252	1/1/2004	3	F	Patient touched unlocked electric transformer box outside of mobile home. She received electrical shock. Electrical shocks are out of scope.	None	Unknown
22	X0410480A 040130HCC2307	1/10/2004	5, 6	M, F	Electrical wiring caused a house fire. The children received burns to the face, arms, hands and back. The burns were from the heat. Clothing did not burn, smolder or melt.	None	Yes
23	B0420126A	2/1/2004	11	M	While burning trash, the boy put a paint can in the fire and the can exploded. The boy received flash flame burns, but the clothing did not burn. Burns to face and upper extremities.	None	N/A

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
24	B0420137A 040212HCC2327	2/8/2004	18 mos.	M	The victim pulled a crock pot full of hot water and roast beef and it fell on him. Scald burns are out of scope.	None	No
25	B0430169A 040310HCC3212	2/28/2004	11	M	The victim put wood and cardboard in the fireplace, squirted it with butane lighter fluid and tried to light it with a multi-purpose lighter. Some of the fluid was on his hand and his hand caught fire. Clothing did not burn.	None	N/A
26	B0430162A 040305HCC2362	2/29/2004	9	M	The boy was stirring a trash fire and threw a paint can into the fire. The can exploded and caught him on fire. The can hit his face, hair, and arm. Clothing did not burn.	None	N/A
27	B0440219A 040421HCC2478	3/6/2004	14	M	The victim was at a friend's for a campout. There was a campfire at the site, and someone had put a gas can too close to the fire. The victim kicked the gas can and his right leg caught fire (between jeans and leg). Clothing did not ignite.	None	No
28	B0440189A 040401HCC1569	3/20/2004	13	M	With friends camping in the yard. A friend slung kerosene leaving a trail of kerosene. The victim thought the kerosene container was going to catch fire so he picked up the can. It was already on fire so the victim threw it and got self on fire. Clothing did not burn.	None	N/A
29	B0440201A 040407HCC2442	3/22/2004	13	M	Victim and friend took gunpowder from the house, put it in bottle with a wick, lit the wick and threw the bottle. The gunpowder did not ignite, the boy went over to the bottle and it exploded. Clothing did not ignite.	None	No
30	B0460249A 040607HAA2541	5/19/2004	8	M	The victim grabbed an electrical wire. Current entered hand and exited stomach. Electrical burns are out of scope.	None	No

Appendix B

This appendix contains foreign nation incidents that were reported through the National Burn Center Reporting System from March 2003 through June 10, 2004. All incidents that occurred outside of the United States or United States properties are included in this table.

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
1	B0430173A 040312HCC2381	5/27/2003	2	M	Child was alone, lit a match and believed to have dropped it on his stomach, igniting the book of matches. The child's clothes were caught on fire.	Undershirt, Shorts	Yes
2	B03C0078A 031219HCC2192	6/19/2003	12	M	Victim possibly poured some type of alcohol or flammable liquid on toy cars then lit them on fire. His clothes subsequently caught fire. 86% total body surface area burns.	P.E. clothes	No
3	X0394129A 030903HCC2647	7/3/2003	12	M	Victim and friend were flying a kite on the roof of the residence. The kite got stuck in electrical wiring and the victim tried to get it out using a metal curtain rod. The electrical surge lit the victim's clothing on fire. He received burns on 53% of his body, mostly on his chest.	Shirt, Pants, Poncho	No
4	X0394134A 030903HCC2655	7/25/2003	7	M	The victim was standing with his mother who was pouring gasoline on a barbeque pit. The gas leaked, mom's hands started burning, she dropped the can, gas spilled and the patio caught fire. The victim had to go through the flames to escape, and his pants melted. 1st and 3rd degree burns to stomach and legs, respectively.	Pants, Shirt	No
5	X03A4980A 031027HCC2045	10/1/2003	9	M	The victim's father had gone to get gasoline, came home and set up an outdoor fire for cooking. He poured gasoline on embers and caused a flash fire. Victim was caught in fire.	Homemade Shirt, Overalls	Unknown

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
6	X03A4907A 031023HCC2035	10/4/2003	9	M	The victim and his brother were making quesadillas in the bathroom. The brother put alcohol in the pan and lit the pan. The victim dropped the pan and was burned over 30% of his body.	Shirt, Shorts	Unknown
7	B03B0005A B03B0005B 031112HCC3042	10/8/2003	8, 8	F, F	Two girls were playing with matches in an abandoned building near a rusty can of machine fluid that leaked onto the floor. One victim lit a match and an explosion occurred. Both of the girls' homemade school uniforms ignited.	Uniform Uniform	No No
8	B0410111A 040116HCC2279	10/20/2003	15 mos.	M	The victim pulled a piece of wood from a stove and his clothing ignited. A house fire resulted.	Shirt, Shorts	No
9	B03C0033A 031202HCC3083	11/15/2003	8	F	There was an explosion in a factory of fireworks (at a neighbor's house). The victim was wearing a silk shirt.	Shirt	Unknown
10	B03C0071A 031215HCC2183	11/16/2003	11	M	The victim was playing with a sibling in a room when the electricity went out. A sister lit a candle, a gasoline container ignited and the victim and sister escaped via a window.	Dress	Unknown
11	B03C0062A 031208HCC2168	11/21/2003	3	M	The long sleeve shirt was ignited by a fire burning in a street near his home. The victim and others were playing with rubbing alcohol which attributed to the incident when some spilled on victim's shirt.	Shirt	No
12	B03C0064A 031208HCC2170	11/29/2003	10	M	The victim fell asleep with a candle burning on a nightstand next to his bed. The candle burned down and ignited the wooden nightstand which spread to the sheets and then to victim.	Pants, Sweatshirt	Yes
13	B03C0084A 031222HCC2195	12/15/2003	5	M	A house fire was believed to have been the result of Christmas tree lights that ignited. Three sisters died in the incident (7, 4, 2 years old).	Underwear	Yes
14	B03C0092A 031230HCC2221	12/23/2003	4	M	The victim was involved in a bus wreck which resulted in a fire.	Shorts, Shirt	No

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
15	B0420138A 040217HCC2333	12/31/2003	5	M	The victim's shorts caught fire from an explosion of fireworks in the back of his father's pick up truck. The father died in the incident.	Pants, Shirt, Shoes	No
16	B0420128A 040204HCC2319	1/2/2004	4	F	The victim was playing in stack of hay that caught fire from a firecracker.	Sweatshirt, Sweatpants, Shirt	No
17	B0410115A 040120HCC2281	1/2/2004	4, 6	F, F	Another child was playing with an object that emitted sparks. The sparks ignited gun powder in the room and an explosion resulted.	Shirt, Shorts Shirt, Shorts	No No
18	B0410110A 040116HCC2278	1/5/2004	3	M	The victim and a cousin were lighting papers with alcohol and ignited clothing.	Shirt, Shorts	Unknown
19	B0440206A 040408HCC1596	1/20/2004	7	M	The victim was playing on a rooftop terrace with a 3 foot piece of wire which contacted high voltage electric wire overhead. Electricity entered the victim's body through both arms. Part or all of both arms were amputated.	T-Shirt, Shorts	No
20	B0420139A 040217HCC2334	1/20/2004	12 mos.	M	A diaper made from sweater-type material caught fire. Fire started when a candle fell on a mattress.	Diaper, Shirt	No
21	B0430161A 040308HCC2365	2/5/2004	9	M	The victim was playing in yard, threw a cassette tape in the air, and contacted a high voltage power line. Sparks fell and ignited clothing.	Jeans, Shirt	No
22	B0430167A 040310HCC3214	2/6/2004	10	M	A lit candle fell near a coca-cola bottle of gasoline in the home. The bottle exploded and the house caught fire. The father died in the fire. The boy was wearing shorts and his body under the shorts was the only part not burned in the fire.	Shorts	Yes
23	B0430168A 040309HCC3207	2/13/2004	3	M	Clothing caught on fire with gasoline - DEATH	Shirt, Pants	No
24	B0430160A 040305HCC2363	2/20/2004	7	M	Victim's mother said a Molotov cocktail was thrown through the window and the child was ignited while watching TV.	T-shirt, Shirt	No

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
25	040510HCC3296 B0450235A	3/31/2004	5	M	An electrical cord caught on fire and the curtains caught fire, and a mirror and perfumes exploded.	Shorts	No
26	040507HCC2506 B0440223A	4/5/2004	13	M	The victim smelled LP gas coming from the kitchen. A brother and neighbor were outside when a spark from the refrigerator ignited the gas and the victim caught fire. Underwear was reportedly burned away.	Underwear	Yes
27	040510HCC3295 B0450236A	4/8/2004	6	M	The victim's uncle was playing with a gasoline can when the can caught fire. The uncle went running to the bathroom. While running, he ran by the victim's bed and caught the bed on fire while the victim was sleeping.	Shirt, Pants	Yes
28	B0460252A 040608HCC2569	5/4/2004	13 mos.	M	The family's LP gas stove hose became loose and moistened the victim's shirt and then caught fire when he got close to the charcoal grill.	Shirt	No
29	B0460253A 040608HCC2568	5/16/2004	2	F	The victim and sibling were in a bedroom. The sibling had rubbing alcohol and matches. The victim's clothing was moist with alcohol and somehow caught fire.	T-shirt, Pants	Yes

Appendix C

This appendix contains in-scope incidents reported through the National Burn Center Reporting System from March 2003 through June 10, 2004. The incidents involve children 14 years old and younger who were treated at burn centers for injuries received when their clothing ignited, melted, or smoldered.

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
1	040512HCC2514 B0450225A	1/10/2003	7	F	The victim was wearing a robe and nightgown, brushed against a space heater and caught them on fire. Parents stated that the robe was new and was flame resistant; nightgown was purchased at a thrift store and was not FR.	Nightgown, Robe	Yes
2	040519HCC2526 B0450244A	2/4/2003	3	M	The victim was playing with other children and was struck in the side by a bottle rocket. The shirt ignited.	Shirt	No
3	B0420149A 040301HCC3192	2/23/2003	9	M	The victim and his brother were playing with matches. They lit a newspaper on fire and the victim's pants caught fire.	Pants	No
4	X0331682A 030707HCC1704	3/25/2003	10	F	The victim was in her home setting the table for dinner. She reached over a burning candle and the shirt caught fire. The mother sprayed the victim with water from the kitchen sink. Pieces of plastic were melted to the victim's midriff.	Gym Shirt	No
5	040519HCC2528 B0450243A	4/18/2003	12	M	The victim and a friend were playing with matches and lighting fires near a barn. It got windy and the boys decided to put the fire out. The victim got a can he thought had water in it, but it had chainsaw fuel in it and he threw it on the fire.	Jeans	No
6	B0440193A 040407HCC2448	4/18/2003	4	M	The victim was standing on a chair over the stove and his shirt caught fire.	Shirt	Unknown
7	040512HCC2513 B0450234A	4/24/2003	5	M	The victim was inside alone while his parents were in the garden. He was playing with a lighter and caught his shirt on fire.	Shirt	No

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
8	X0352188A 030519HCC2454	4/24/2003	13	M	A fire set by a peer was the cause of injury. All information unknown.	Unknown	Unknown
9	X0352118A 030513HAA1543	5/3/2003	11	M	The victim was attempting to light a pot-type BBQ pit with gasoline. Some gasoline spilled on his clothing and when he lit the pit, the clothing lit also. He ran to his mother who put the flames out. The shirt was completely burned and jeans singed.	T-shirt, Jeans	No
10	B0420151A 040301HCC3198	5/5/2003	8	M	The victim was lighting a baseball on fire with matches. It wasn't burning fast enough so he got model plane fuel and poured it onto the baseball. The fire flashed and the victim dropped a can and fuel spilled. It got onto his sock and ignited.	Socks	No
11	X0352232A 030530HAA1583	5/12/2003	11	M	The victim was watching a family friend (12 years old) make a puddle of gasoline in the carport and throw a lit match at the puddle. The victim tried to stomp the fire out and lit his pant leg on fire. He rolled on the ground to put the flames out.	Denim jeans, Sneakers	No
12	X0352192A 030521HCC2456	5/13/2003	4	F	The victim's mother had left four candles burning in the kitchen and left the child unattended. The victim gained access to the candles somehow and the dress caught fire. The child went to her mother and they took the dress off and got her in the shower to extinguish the flame.	Dress	No
13	B0410104A 040108HCC1322	5/20/2003	12	F	The victim leaned over a candle that ignited the child's clothing.	Unknown	Unknown
14	B0440194A 040407HCC2447	5/26/2003	4	F	The victim fell into a pile of coals and the fire burned through shirt.	Shirt	No

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
15	B0420130A 030604HNE7924 dup in other database	6/2/2003	7	M	The victim was sitting on the counter next to a stove and all four burners were on. He contacted a burner and his clothing caught fire. It is believed that the fringed belt is the first thing that caught fire.	Dress shirt, Pants, Fringed Belt	No
16	040512HCC2511 B0450226A	6/11/2003	13	M	The victim was helping his father repair a lawn mower. They had taken the engine apart and when they cranked the engine, something sparked and sprayed gasoline on the victim which ignited him. The bottom of the shorts ignited then smoldered.	Shorts	No
17	X0362652A 030616HCC1629	6/11/2003	11	M	The victim was at a friend's house setting leaves on fire. He had a candle in one hand and container of gasoline in the other. He dropped the gasoline lighting his leg on fire. A small portion of the edge of his shorts singed.	Shorts	No
18	X0362791A03070 1HCC3327	6/23/2003	10	M	The victim was playing with friends and got squirted with lighter fluid and then got lit on fire. The boys were re-enacting a movie/TV stunt.	T-shirt	No
19	B0420153A 040301HCC3194	7/4/2003	4	M	The victim jumped over a firecracker and his shorts caught on fire.	Shorts	No
20	B0420154A 040301HCC3199	7/4/2003	9	M	The victim was playing with fireworks and one of them caught his shorts on fire.	Shorts	No
21	X0373151A 030724HCC1753	7/5/2003	14	F	A stray firecracker struck the victim's thigh where it became lodged and exploded.	T-shirt, Shorts	No
22	B03B0020A 031117HCC2100	7/5/2003	7	M	A bunch of boys were outside playing by a fire. One boy started throwing gasoline around from the can and some of it got on the victim's shorts. It is believed he was trying to light a firework and lit his shorts.	Shirt, Shorts	No

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
23	X0373110A 030721HCC1725	7/7/2003	2	M	The victim's brother took a neighbor's fireworks and a cigarette lighter in the yard with he and the victim. Their mother heard the victim screaming and saw his sleeve was on fire. The father patted the flames out and then they went to the hospital. The brother later said they stuffed paper into a hibachi grill, lit it and the victim got too close.	T-shirt	No
24	X0373011A 030716HCC2566	7/7/2003	9	M	The victim was attempting to perform a magic trick using alcohol and a disposable lighter. The alcohol got on his hands and he cleaned them on his shirt. When he lit the lighter, his shirt caught fire and burned his shoulder, chest and chin.	T-shirt	No
25	X0373210A 030724HCC1756	7/11/2003	3	M	The victim's father poured gasoline into the carburetor of a lawn mower to try to start the engine and attempted to start it. The victim was standing next to the mower and the flash reached him. It ignited the victim's t-shirt and shorts.	Tank top, Shorts	No
26	040512HCC2512 B0450227A	7/12/2003	11	M	The victim used a lighter and a can of hairspray to make a blow torch and ignited his clothing and bedding.	Jeans	No
27	B0440203A 040408HCC1588	7/13/2003	7	M	The victim was imitating his father at the charcoal grill. When the father was inside, the victim squirted lighter fluid on an already lit fire in the grill, it exploded outward catching the victim on fire. DEATH	Unknown	Unknown
28	X0373152A 030723HCC1749	7/18/2003	10	F	The victim and her brother soaked paper towels in gasoline and put them on a smoldering campfire. A flash erupted and ignited the victim's shorts, melting the shorts.	Shorts	No
29	B0440196A 040407HCC2444	7/18/2003	11	M	The victim's pants caught on fire while trying to put out a fire in a garbage can. While trying to put flames out, pants caught fire.	Pants	Unknown

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
30	X0383443A 030805HCC2604	7/24/2003	7	M	The victim and his sister started a small fire in the yard with paper and sticks. The victim tossed gasoline onto the fire and flames reached back up to victim and the gasoline bucket. The shorts caught on fire. An	Shorts	No
31	X0383445A 030806HCC1785	7/31/2003	14	M	A friend poured gasoline on a trash/brush fire. The victim was standing close to the fire when flames flashed setting the victim on fire.	T-shirt	No
32	040512HCC2516 B0450228A	8/1/2003	12	F	The child was wearing a nightgown and playing with a cigarette lighter. Her clothing caught fire.	Nightgown	Yes
33	X03A4593A 031010HCC1045	8/8/2003	10	M	The boy was spraying matchbox cars with insect spray and some got on his pants. He lit the lighter and his pants also ignited.	Pants	No
34	X0383719A 030812HCC3376	8/8/2003	7	F	The victim was with her grandmother, praying to a statue next to an oil lamp/candle. The victim reached over the lamp/candle and the armpit of her nightgown contacted the flame. She ran into the grandmother's room and the grandmother removed the clothing from the victim. The cotton material of nightgown was purchased in India.	Handmade nightgown	Yes
35	X0383841A 030821HCC1825	8/15/2003	14	M	The victim spilled gasoline on the concrete patio in front of his residence and wiped it up with a towel. He decided to burn the towel after he was finished, lighting the towel with a cigarette lighter. As he was watching the fire, the cuff of the victim's jeans ignited. He tried to get them off but they got caught on his ankles. His brother poured water on him.	Jeans	No
36	B0440195A 040407HCC2449	8/16/2003	6	M	The victim and his brother were lighting gum wrappers on fire with a lighter. A gum wrapper dropped or the lighter contacted the victim's shirt and caught it on fire.	T-Shirt	No

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
37	X0394291A 030904HCC1880	8/17/2003	11	M	The victim, with developmental handicaps, was jumping up and down on the living room furniture while his grandparents were in another room. They heard screaming and saw the boy's shirt on fire. It is suspected that the contact was with a halogen lamp.	Shirt	No
38	X0394451A 031001HCC1009	8/18/2003	12	M	The victim and his brothers were squirting gasoline onto a campfire in their back yard. A spark jumped from the fire and landed in the gasoline can the victim was holding and his clothing caught fire. While the clothing was worn as sleepwear, it was not marketed as sleepwear.	T-Shirt, Shorts	Yes
39	040519HCC2527 B0450245A	8/19/2003	9	M	The victim was cooking in the microwave above the stove. While cooking he was playing with the burners and reached up to the microwave catching his sleeve on fire by the gas burner flame.	Shirt	No
40	B0420156A 040301HCC3197	8/26/2003	10	M	The victim and a friend poured torch fuel onto dry brush and lit it with a multi-purpose lighter. The fire spread quickly and the victim was trapped between the fire and a fence.	T-Shirt, Shorts	Unknown
41	X0394381A 030917HCC1933	8/29/2003	13	M	The victim had cleaned a bicycle chain with gasoline. He was swinging it around to dry it and it struck a car battery and his shirt subsequently ignited. He rolled on the ground to extinguish the fire.	Shirt	No
42	B0440197A 040407HCC2446	8/30/2003	13	M	The victim caught his pants on fire while playing with fireworks.	Pants	No
43	X03B5137A 031106HCC1139	8/30/2003	12	F	A bottle of perfume spilled and ignited while the victim was playing with a lighter. Her sock ignited and she burned her foot.	Sock	Unknown

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
44	B0440198 040407HCC2445	8/30/2003	13	M	The victim was sprayed by a flammable liquid by another child and his clothing ignited from a spark.	T-shirt	Unknown
45	X0394421A 030924HCC1940	8/31/2003	7	M	The victim's sister poured perfume onto the victim's clothing and then ignited them with a cigarette lighter. The mother jumped up, took the shorts off of the victim and put him in the bath.	Shorts	No
46	X0394398A 030917HCC1931	9/4/2003	14	M	The victim was in the garage reportedly feeding the dog (one report was that he was smoking marijuana). The dog is reported to have kicked a can of gasoline over, the gas ran under the hot water heater and ignited. The victim stepped in the gasoline, his leg caught fire and his shorts caught fire.	Jean shorts	No
47	X0394383A 030915HCC1912	9/7/2003	5	M	The victim was lighting papers on fire in the bed of his father's pick-up truck. He couldn't put one out, hid it and caught his shirt on fire.	Shirt	No
48	X0394452A 031001HCC1010	9/15/2003	8	M	The victim and two other children were in the yard making a bomb using a plastic juice bottle, styrofoam and gasoline. The other boy lit the styrofoam, then stepped on it and a flame shot out hitting the victim's chest. His shirt and shorts around the waist area caught fire.	Shirt, Shorts	No
49	B03B0010A 031113HCC1159	9/16/2003	3	M	The victim's mom filled the lawn mower with gasoline, put the can in the garage near the water heater and left it open. She went to mow grass and left the victim in the garage unsupervised. He knocked over the gas can and the heater exploded. The boy went running out of the garage on fire.	Jeans, T-shirt	No

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
50	X0394466A 030923HAA2684	9/16/2003	10	M	The victim and his stepfather were burning trash, as was a usual routine, and there were spray paint cans in the trash bin. One of the paint cans exploded and ignited the victim's pant leg. The father said the shirt smoldered but did not ignite, pants shell burned completely. The victim rarely slept in the clothing, it was mostly used as daywear.	Shirt, Pants	Yes
51	X03A4690A 031014HAA2015	9/24/2003	2	M	The victim went into the garage and picked up a bottle with gasoline inside. He either poured it onto his toy lawn mower or dropped it. Since he was near the gas water heater, it is believed that the gasoline contacted the pilot light and a flash fire resulted. The boy was engulfed in flames.	Pants, Shoes, Shirt, Sock	No
52	X03A4691A 031014HCC2016	9/27/2003	3	F	The victim was sleeping on her mom's bed in a mobile home. The smoke detector went off and an uncle went and got the nephew out of the house, then got the victim. The fire was deemed suspicious and canines smelled accelerant.	Blouse, Skorts	Yes
53	X03A4713A 031017HCC1055	10/4/2003	10	M	One boy poured a solvent onto the victim's back while he was playing on all fours and lit him with a cigarette lighter. He rolled and put the flames out, but stood up and the flames started again.	Shirt, Shorts	No
54	X03A4714A 031017HCC1054	10/4/2003	10	M	The victim and a friend had a bon fire and torches going on in the back yard. The friend poured gasoline on the torches and the fire and some splashed on victim's coveralls. The fire flared and ignited the coveralls.	Coveralls	No
55	B0440199A 040407HCC2450	10/6/2003	13	M	The victim and his friends were outside playing with a gas-powered remote controlled car. The victim was refueling the car and gasoline got on his pants. It is unknown how the pants caught fire.	Pants	No

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
56	B03B0021A 031119HCC2104	10/8/2003	13	M	Gas from a weed trimmer spilled on his jeans and burned his leg. Jeans smoldered.	Jeans	No
57	X03A4715A 031017HCC1053	10/12/2003	13	M	The victim was making cookies and spilled lemon extract onto his shirt. He reached over a burner and the area of the shirt with the extract ignited. The shirt burned and he received thermal burns.	Shirt	No
58	B03B0008A 031114HCC2093	10/18/2003	13	M	The victim and a friend wanted to grill hotdogs. The charcoals were lit and the victim took a gas can and was holding it above his head when it caught on fire. The gas can exploded in victim's hands.	T-shirt	Yes
59	B03B0022A 031119HCC2107	10/19/2003	7	M	The victim's friend lit his shirt with a lighter as he rode by on bicycle.	Shirt	No
60	X03A4847A 031022HCC3017	10/19/2003	10	M	The family was burning a box of products and something (probably batteries) in the box exploded. The victim's hat caught fire. It is believed that the fire went up his shirt, burned his side, neck and cheek.	Hat	No
61	B03B0032A 031201HCC2147	10/19/2003	11	M	Hot air balloons are housed in a trailer. A family was filling balloons from propane tank and victim was alone in the trailer. The family heard a sound and the dad saw the trailer on fire. The victim said he kicked something inside the trailer and caused a spark that caused the ignition. Clothing was burned off his body.	Shirt, Shorts	No
62	X03A4982A 031027HCC2043	10/20/2003	4	M	The victim was in his bedroom playing with a disposable lighter when he caught his shirt on fire. The clothing was worn as sleepwear, but was not marketed as sleepwear.	Shirt	Yes

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
63	X03A4974A 031027HCC2041	10/21/2003	4	M	The victim was sitting on sofa next to the fireplace. A visiting adult put a wet log on the fire and put gasoline on the fire. A house fire started. The victim was burned on his toes and chest. The shirt did smell of gasoline.	Shirt	No
64	X03A5021A 031028HCC1091	10/22/2003	3	M	The victim was at a babysitter's house and fell into a pile of burning trash. The fire may have involved gasoline. He was burned on his chest and arms.	Shirt	No
65	X03A5020A 031029HCC2048	10/23/2003	11	M	The victim was huffing gasoline fumes in living room and spilled it on his clothing. Either he or a friend flicked a lighter and the clothing caught fire.	Undershirt, Shirt, Jeans	No
66	B03B0024A 031119HCC1171	10/23/2003	10	M	The victim and some boys were burning trash and jumping over the trash pile. Either the victim added gasoline and it arched back or another boy added gasoline and it spilled on the victim. The victim's left pant leg caught fire.	Pants	No
67	B0420157A 040227HAA3190	10/24/2003	6 mos.	F	A firefighter had to get the victim out of the crib during a house fire. The victim came in direct contact with the flames/heat source during the evacuation.	Unknown	Yes
68	X03A5025A 031029HCC3019	10/25/2003	8	F	The victim was in a homemade Halloween costume at a backyard party. She contacted a tea-light candle and the costume ignited.	Costume	No
69	I03B0134A 031112HCC1151	10/25/2003	3	F	The victim was wearing a Minnie Mouse costume at a Halloween party. Two boys were horse playing and bumped into a table, knocking over a sterno. The sterno fuel splashed and caught victim's costume on fire.	Costume	No
70	B03B0028A 031125HCC3061	10/26/2003	2	F	The victim was wearing a traditional Indian dress and walked outside and contacted tea light candles on ground. The front of the dress caught fire. Garments were purchased in India.	Dress	No

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
71	X03B5136A 031106HCC1138	10/29/2003	13	M	The victim was burning trash in a dirt pit in the backyard. He filled a half-full bottle of lighter fluid with gasoline, then poured the combination fluid on the dirt pit and lit a fire. The fire lit vapors from the open can and exploded, fluid got on his shorts and the pants caught fire.	Shorts	No
72	X03B5138A 031107HCC3037	10/31/2003	5	M	The victim was playing with a lighter and caught his shirt on fire. He started running around and his parents doused him with water.	T-shirt	No
73	B03B0002A 031114HCC2092	11/4/2003	10	F	The victim's parents started a campfire with gasoline and then left the camp area to go to the store. The victim poured gasoline on the fire and then she caught fire. She dropped and rolled.	Pants, Undershirt, Shoes	Unknown
74	X03B5225A 031107HCC3040	11/5/2003	202	M	The victim's mom wasn't at home and the aunt was holding the child. The grandmother lit a candle near a propane stove and a house/trailer fire resulted. The clothing was size 6-12 mos. and it smoldered but did not ignite. The child was burned on the face, not on the body under the sleepwear.	One piece pajamas	Yes
75	B03B0030A 031128HCC1199	11/6/2003	14	M	The victim rode an ATV and built a fire with gasoline on a log. The fire flashed and ignited the victim's coveralls where gas had spilled. He received burns below the knee level.	Coveralls	No
76	B03B0007A 031113HCC3050	11/8/2003	7	M	A father was riding an ATV and went inside after getting off. While inside, the victim somehow got onto an ATV and when the dad came back out, the ATV was flipped, on fire, and the victim's clothing was on fire.	T-shirt, Shorts	No

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
77	B03B0003A B03B0003B 031112HCC1150	11/8/2003	11, 9	M, M	One boy set a plastic gas can down within a few feet of a small campfire in a backyard. The 11 year old picked it up to move and it exploded. The 11 year old's clothing and 9 year old's clothing ignited.	Jeans, Undershirt, T-shirt, Underwear V2: Shorts	No
78	B03B0011A 031118HCC2102	11/8/2003	2	M	The victim poured paint thinner from an open container on him and went out to play. He played near a BBQ pit and while his uncle was not looking at him, he caught on fire.	Shirt, Sweater	Unknown
79	B03C0034A 031202HCC1208	11/9/2003	7	F	The victim was playing with matches in the bedroom. The bedding caught fire and she tried to put it out and her clothing ignited. The clothing burned completely off of her body and the victim died. Death.	T-shirt, Underpants, Sweatshirt	No
80	B03B0009A 031114HCC2094	11/9/2003	13	M	The victim and his family were sitting around a campfire in the yard. The victim's parents went inside leaving the victim outside unsupervised. A younger brother was in the house and saw the victim on fire.	Jacket	No
81	B0410101A 040106HCC3136	11/10/2003	20 mos.	F	The victim was playing with glue that the grandmother was using to make magnets. There were candles lit nearby. The victim got glue on her pants, was dancing around and got too close to a candle. Glue and pants ignited.	Sweatpants	Unknown
82	B03B0016A 031117HCC1166	11/13/2003	5	F	The victim had a birth defect but it is not believed to have affected the situation. She had picked up a cigarette lighter and played with it and ignited the lower left front of vest which then moved to the shirt.	Shirt, Vest	No

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
83	B03B0017A 031117HCC1165	11/13/2003	4	M	The victim and his 12 year old brother were playing in a make-shift camp in the yard. The brother put twigs in a gas can with gasoline and somehow a fire started, but the can did not explode. The victim received burns on face and left hand; pants singed, did not ignite.	Wind pants	No
84	B03B0023A 031119HCC2106	11/14/2003	5	F	The victim and a friend were playing in a back room near a lit candle. The friend ran out to adults saying that the victim's dress was on fire. The bowtie on the back of the dress was the original piece to ignite.	Dress	No
85	B03C0065A 031208HCC1229	11/15/2003	11	M	The victim's friend had filled a cup with gas to pour on the campfire. The friend tossed the gas at the flames but missed and the gas landed on victim. The gas lit as it crossed the fire and victim was involved.	Jeans	No
86	B03B0025A 031119HCC3054	11/17/2003	11	M	The victim was playing with friends. A friend found lighter fluid, put some in a small container and lit it. The container spilled, fluid contacted victim's knee and it caught fire. The victim dropped and rolled but went into a puddle of burning lighter fluid.	Shirt	No
87	B03C0035A 031202HCC1210	11/17/2003	7	M	The victim's sibling lit a birthday candle and threw it when it got too hot. The sibling threw it onto bedding. The victim got hurt sometime during the large fire that resulted.	Undershirt	Yes
88	B03B0026A 031124HCC2133	11/18/2003	5	M	The victim received burns on his stomach and side when his shirt ignited from a glass jar candle.	Shirt	Unknown
89	B03B0027A 031121HCC1182	11/19/2003	5	M	The victim opened the oven door, climbed up onto range and accidentally turned on the burner. The flames ignited the sleeve of his long sleeve shirt.	Shirt	No

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
90	B03C0066A 031209HCC1231	11/19/2003	3	M	Either the lighter, a cigarette, or the child started a fire in a mobile home. The child was burned on areas of the body except for the area covered by the diaper. Two adults died in the fire (one after saving victim).	Diaper	Yes
91	B03B0029A 031125HCC1191	11/20/2003	4	M	The victim was inside a hay loft and his sister accidentally lit the loft on fire. The victim was stuck in the loft. He was burned on all parts of his body except where the family dog was sitting in the victim's lap.	T-shirt, Long pants	No
92	B03C0050A 031203HCC3089	11/26/2003	7	F	The victim was outside of her home, it was cold and they started a fire in a metal trash can. The girl was standing with her back to the fire. Her sweater ignited and most of the back was destroyed.	Sweater, Sweatpants	Unknown
93	B03C0072A 031215HCC1242	11/28/2003	11	M	The family was burning a campfire. The victim poured kerosene onto the fire to enlarge flames and received burns to arm, arm pit and face.	Shirt	No
94	B03C0039A 031204HCC2156	11/28/2003	12	M	The victim poured gasoline mixed with oil onto a wood fire, causing it to flare up. He dropped the container and fuel spilled onto ground and his clothing and pants ignited.	Jacket, Jeans	No
95	040512HCC2510 B0450229A	11/28/2003	7	F	The victim was angry with her mother and purposely held her t-shirt over a candle flame to light it on fire.	T-shirt	Yes
96	B03C0036A 031202HCC1209	11/30/2003	14	M	Some boys started several small fires using sticks, matches, and gasoline. The victim attempted to put out a fire and a friend squirted gas on and around victim and fire which flared up.	Jogging suit, Winter coat	No

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
97	B03C0037A 031203HCC1219	11/30/2003	6	M	The victim's mother and victim were putting pieces of paper on a fire in a bucket that was started with gasoline (originally burning fire ants in bucket). The wind blew sparks which lit his shirt. T-shirt burned up, but have similar one in different color as sample.	T-Shirt	Yes
98	B0410097A 040106HCC2250	12/1/2003	23 mos.	F	A house burned down. The victim woke up and the whole house was on fire. The diaper melted. The father saved the victim and the sibling died in the fire.	Diaper	Yes
99	B03C0083A 031222HCC2196	12/2/2003	4	F	The victim was walking backwards on the gravel road in front of her home, tripped, fell into fire that grandma had started.	Coat, Jeans, Underwear, Shirt	No
100	B03C0068A 031222HCC1273	12/2/2003	14	M	The victim started a small campfire to keep warm and it began to smoke and smolder out. The victim approached and poured gasoline on it, it flashed upward.	Sweatpants, Sweatshirt	No
101	B03C0087A 031229HCC2217	12/4/2003	2	F	The victim was sitting with her aunt when the victim got up and ran towards a cinder block fire pit, tripped and fell hands first into burn pit full of hot embers. Jacket melted onto victim's arms.	Jacket	Unknown
102	B03C0069A 031210HCC1233	12/4/2003	4 mos.	M	The victim was in a crib and there was a house fire. He was wearing a shirt and diaper.	Shirt, Diaper	Yes
103	B03C0067A 031209HCC1232	12/7/2003	4	M	The victim obtained a lighter, was hiding it from grandmother and it lit against his shirt and chest.	T-shirt	No
104	B03C0073A 031217HCC2186	12/7/2003	12 mos.	F	While standing near a smothered bonfire, the victim fell with her hand landing in the fire. The jacket the child was wearing melted on the mother's fingers, but not on the victim. The victim was burned on her fingers and wrist.	Jacket	Unknown

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
105	B03C0070A 031212HCC2180	12/9/2003	5	M	There were gas jugs on the laps of people in a car. Some struck a lighter and the gas jugs exploded and the driver went into a ditch.	Sweatshirt, Jeans	Unknown
106	B03C0074A 031216HCC1245	12/11/2003	8	M	The victim and two adults were standing in doorway lighting fireworks. A spark went into his pocket and lit jumping jacks. The heat burned the victim's legs through the inside of his pocket.	Jeans	No
107	B03C0077A 031219HCC2190	12/11/2003	6	M	A sibling spraying paint from a can was sprayed toward burning trash. This caused a line of fire that injured victim. Mother believes jacket protected from further injury.	Jacket	No
108	B03C0075A 031216HCC1244	12/13/2003	10	M	The victim's father threw gasoline on a burning fire in a fireplace. The father caught his hands on fire and ran outside to extinguish. When he went outside, a back flash occurred. The carpet caught fire and the victim tried to extinguish it and shirt caught fire.	Shirt	No
109	B0410105A 040108HCC1321	12/15/2003	10	F	The victim was leaning on space heater to get warm. Her skirt caught fire.	Skirt	No
110	B03C0091A 031230HCC2220	12/19/2003	7	M	A house fire occurred. Four other children were injured in incident, but were not treated at the burn center.	Pants	Yes
111	B0410099A 040105HCC1313	12/21/2003	13	M	The victim and a cousin built a fire in a fire pit to cook hot dogs. They got lighter fluid and put lighter fluid on the fire, some got on the victim's leg. He kicked a log to get it back in the fire and the shoe, sock, pants caught fire.	Jeans, Socks, Shoe	No
112	B0410098A 040105HCC1312	12/22/2003	8	M	The victim's father and uncle were burning leaves and a tree stump. The victim saw a can of gas close to fire and moved it. The gasoline spilled and caught fire. The victim fell in the fire.	Shirt	Yes

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
113	B03C0088A 031229HCC1293	12/23/2003	13	M	The victim was trying to light a bug candle. He lit the lighter, not noticing that there was a container of gasoline a short distance away. As soon as the lighter ignited, he found his shirt and face engulfed in flames.	Shirt	No
114	B03C0094A 031230HCC2222	12/23/2003	11	M	The victim was playing around a garbage can that contained flammables (in an auto body shop). He was playing with a lighter.	Shirt, Pants, Coat, Underwear	No
115	B03C0093A 031229HCC3123	12/23/2003	7	F	The victim was with her father when the incident occurred. There was an explosion. It is possible that the father was attempting suicide. No information will be released by officials.	Shirt, Pants	Unknown
116	B03C0095A 040102HCC2228	12/24/2003	14	M	The victim was jumping over campfire embers while another person tossed gasoline onto embers, increasing flame size.	Warm up suit	No
117	B0410112A 040304HCC2357	12/26/2003	6	M	The victim kicked a small gas and oil fire to put it out.	Pants	Unknown
118	I0420182A 040209HCC1411	12/29/2003	8	M	The victim was standing near a fire in a wood stove holding a can of gasoline. The mother believes the vapors ignited and caught the victim's shirt on fire.	Shirt	No
119	B0410114A 040120HCC3158	12/30/2003	14, 14	M, M	The victim started throwing multiple flammables into the fire and there were multiple explosions. The victim approached a can that was hissing and it exploded.	V1: Shirt, Pants V2: Shirt, Shirt, Pants	No
120	B0410102A 040108HCC3142	12/31/2003	9	M	The victim made a campfire in a pit with gasoline and diesel fuel. The fuel got splashed on the victim. When the victim got close to the fire, he burst into flames.	Pants, Shirt	No

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
121	B0410109A 040115HCC1353	12/31/2003	14	M	The victim started a small bonfire with logs and sticks. He poured gasoline on the logs and lit a match then he sat down on an old metal gas can. The heat ignited the fumes in the can and the can exploded.	Shorts	No
122	B0410103A 040107HCC1320	1/1/2004	14	M	A firecracker in the victim's pocket ignited from spark from a firecracker in the victim's hand. The garments did not ignite, but smoldered the entire time they were on the victim.	Pants, Boxers	No
123	B0410100A 040106HCC2249	1/2/2004	4	M	Propane gas wall-mounted heater overheated and the house caught fire. The garment was noted as having soot on it. The family was sleeping and tried to get out of house. They were found near the door.	Pajamas	Yes
124	B0410108A 040115HCC1352	1/4/2004	12	M	Another child was putting gas on a fire, got scared about the cup catching fire, threw the cup and gas got on victim. The victim's shirt caught fire.	Shirt	Yes
125	B0410107A 040114HCC2267	1/5/2004	11	M	Children were burning leaves in a 5-gallon bucket and one child poured gasoline and flames went into air. The victim left to get help and another child kicked the bucket which sent flames into victim's back. The other version is that the victim was playing with matches and gasoline and it exploded.	T-shirt, Shorts	No
126	040512HCC2515 B0450233A	1/5/2004	4	M	The victim was playing with matches when the incident occurred. The investigator is unable to locate the victim.	T-shirt, T-shirt, Underwear	Unknown
127	B0410119A 040126HCC2287	1/6/2004	3	F	The victim was playing with her brother and climbed on table to get away from him. A burner from gas stove was left on and the "dress" the victim was wearing contacted the burner. "Dress" was actually a maternity shirt.	Maternity shirt	No

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
128	040512HCC2509 B0450230A	1/7/2004	4	M	The victim started a fire by playing with a cigarette lighter in a bedroom.	Jeans, Socks	No
129	B0410117A 040122HCC1355	1/7/2004	13	M	Kids in an apartment complex started a fire with lighter fluid. The victim attempted to put out the fire by stomping on it when his pants caught on fire. The flames were contained within jeans.	Jeans	No
130	040512HCC2508 B0450231A	1/10/2004	10	M	Two brothers were playing with a lighter trying to catch each other person on fire.	Shirt	No
131	040512HCC2507 B0450232A	1/12/2004	4	M	The victim's mother had left a candle burning in a room. The victim went into the room and tried to burn off a thread from his shirt, catching his sleeve on fire.	Shirt	No
132	B0410122A 040130HCC3166	1/15/2004	13	M	The victim was siphoning gas from a 55G drum to a smaller container for a car. He spilled it on his t-shirt and pants. A friend came up to the victim with a lighter and lit the shirt.	T-Shirt, Pants	No
133	B0420127A 040204HCC2320	1/15/2004	12	M	The victim was hospitalized for burns when he stumbled into a stove and his pajamas caught fire.	Pajamas	Yes
134	B0410124A 040130HCC2303	1/16/2004	11	F	The victim had wet her bed, showered and then changed into her mom's slip and gone back to sleep. During the night, a blanket or bed spread contacted an electric space heater causing a trailer fire. No information was available beyond fire report.	Adult slip	Yes
135	B0410118A 040120HCC2282	1/17/2004	2	M	The victim's father put gas or diesel fuel on a brush to get rid of trash. The fire flashed and the victim's shirt was singed.	Shirt, Pants	No
136	B0420129A 040209HCC3177	1/21/2004	6	M	The victim lit a starter log and then put it in a can of carburetor cleaner thinking that the can contained water. The fire flashed up in his face.	T-shirt	No

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
137	B0410120A 040126HCC2286	1/22/2004	7	M	The victim was developmentally delayed. He reached across a hot burner to make noodles and his sweater contacted the burner. The sweater and t-shirt both caught fire.	Shirt, Sweater	Yes-Tsp-shirt No-Sweater
138	B0410123A B0430184A 040129HCC1371	1/24/2004	10	F	The shirt and matching underwear were intended to be undergarments but sometimes worn as sleepwear. The victim leaned over a candle and part of her shirt contacted the flame and the shirt caught fire.	T-shirt	Yes
139	B0420133A 040209HCC3175	1/25/2004	4, 10	M, M	Two victims were hospitalized for burns after their shirt and jeans caught fire from a mattress fire. The children were playing with a lighter.	V1: Shirt, Flannel shirt, Jeans V2: Jeans	No
140	B0420146A 040227HCC1467	1/27/2004	14	F	The victim was in shop class using a blow torch when a piece of molten metal fell from the car she was working on overhead and into the jacket sleeve causing it to ignite.	Lab Coat	No
141	B0420132A 040209HCC3176	1/28/2004	5	F	The victim and a friend were playing with a cigarette lighter and someone decided to light the victim's shirt.	Pullover shirt	No
142	B0420125A 040202HCC2317	1/28/2004	14	M	The victim and a friend were "messing around" with a BBQ pit trying to light charcoals. They poured lighter fluid on the charcoals and struck a match to light it. The victim was standing too close and his clothes caught fire. Pants caught, then shirt.	T-Shirt, Sweatpants	Unknown
143	B0420144A 040224HCC2339	1/31/2004	5	M	The victim was filling a lighter with lighter fluid and spilled some on self. He caught his shirt on fire.	Shirt	No

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
144	B0420131A 040206HAA1404	2/4/2004	9 mos.	M	The victim and a sibling were laying on a blanket in the living room. The 3 y/o sibling was playing with matches near the blanket. The sibling dropped a match and caught the blanket on fire. The victim tried to crawl away, but sustained burns. Romper suit melted at points of contact.	Sleeper	Yes
145	B0420140A 040218HCC1443	2/7/2004	13	M	The victim and a friend went to cook on a gas grill. The friend went to light the grill when a nearby milk jug containing gasoline exploded and ignited the boys pants.	Corduroy Pants	No
146	I0420181A 040209HCC1410	2/7/2004	10	M	The victim and a friend had a bonfire and were throwing paint cans into fire. One can didn't explode, so they went up and hit it with a hammer. It exploded.	Jacket	No
147	B0420141A 040223HCC2337	2/7/2004	2	F	The victim was injured in a house fire started by a candle that was knocked over. All the family was sleeping at the time of the fire.	T-shirt, Underwear	Yes
148	B0420147A 040227HCC1466	2/16/2004	12	M	The victim was leaning over a dresser to look in a mirror when his shirt contacted a lit candle and caught fire.	T-shirt	No
149	B0420143A 040224HCC1453	2/16/2004	13	M	The cause of the fire is questionable, but something caused an explosion in a shed and it caught the victim's clothing on fire.	Jeans	No
150	B0420145A 040226HCC2344	2/17/2004	13	F	A suspected arsonist poured gasoline on victim, sibling and mother and lit them on fire.	Unknown	Unknown
151	B0420142A 040223HCC1449	2/21/2004	6	F	The victim was playing with a cigarette lighter that she got out of the glove compartment of the car and caught her clothing on fire.	Sundress, Sportsbra	No
152	B0440200A 040406HCC1579	2/21/2004	12	M	The victim and friends were burning an ant hill. The victim picked up a partially filled gasoline can to move away from the heat and it caught fire.	T-shirt, Jeans	No

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
153	B0440191A 040405HCC2440	2/22/2004	8	M	The victim was with his family at a religious function. Candles were burning and the child got too close to the candles and his clothing ignited.	Unknown	No
154	B0430183A 040317HCC1514	2/24/2004	3	M	Children were playing near a trash fire. The victim had multiple physical and mental health problems and fell into the trash fire while his parents were inside. The jacket sleeves melted and stuck to hands.	Jacket	Unknown
155	B0430182A 040317HCC1508	2/25/2004	13	F	The victim was preparing soup and caught her sleeve on fire. She attempted to put out the fire by patting her back and shoulders and the fire spread to other parts of her body in the meantime.	Shirt	Unknown
156	B0430164A 040304HCC1484	2/26/2004	14	M	The victim borrowed a pair of sweatpants from a friend's dad. The sweatpants were in the garage and evidently had a flammable liquid on them. A friend dropped a cigarette and the cigarette lit the victim's sweatpants.	Sweatpants	No
157	B0430172A 040310HCC3211	2/26/2004	9	M	The victim attempted to start a fire in a neighbor's backyard with either matches or a lighter. His shirt ignited. He is not willing to talk about the incident.	Shirt, Pants	Unknown
158	B0440192A 040405HCC2439	2/28/2004	11	M	The victim was playing with a lighter and ignited his clothing.	Unknown	No
159	B0430181A 040316HCC1505	2/28/2004	9	M	The victim was burning leaves with his grandfather who left victim unattended. The victim threw gasoline onto leaves. His shirt and pants caught fire.	Shirt, Pants	No
160	B0430163A 040304HCC1485	2/29/2004	13	M	A victim and friend were lighting things on fire. They poured gasoline onto a whiffle ball, lit the ball and kicked the ball. As he did so, the pant leg caught fire.	Jeans	No

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
161	B0430170A 040310HCC3213	3/1/2004	14	M	The victim lit a match to see inside of a can of gas that he had dropped a wire inside. The gas lit and the victim ran and spilled gas on his clothes which ignited.	Jeans	No
162	B0430166A 040308HCC3206	3/3/2004	11	M	The victim was burned when running from a burning home. The boy ran out the door directly into flames of a back draft.	T-shirt, Boxers	Unknown
163	B0430174A 040310HCC1499	3/4/2004	8	F	The victim was in a bedroom, playing with matches and set the bedding on fire which subsequently caught her shirt on fire.	Shirt	No
164	B0430176A 040315HCC2383	3/5/2004	11	M	The victim was at a gas station when someone threw a cigarette and it hit a small pool of gas at the victim's feet.	Pants, Shoe	No
165	B0430188A 040401HCC3234	3/5/2004	5	F	The victim went into the kitchen unsupervised and turned on the stove to cook. She caught her shirt on fire.	Shirt	Yes
166	B0430178A 040312HCC2380	3/6/2004	13	M	The victim and friends made a fire ring in the grass to cook hot dogs. One kid had a bottle with gasoline in it, he threw it at the smoldering fire, it exploded and the victim's shirt and pants caught fire.	Jeans, Sweatshirt	No
167	B0430177A 040312HCC2379	3/6/2004	12	M	The victim (autistic) was wearing a cotton t-shirt and disposable diaper during the incident. He got confused during a house fire and didn't know how to exit the home. He was burned during the fire. The shirt was tight fitting and believed to have protected him. Was burned on his head, face, shoulders, arms.	T-shirt, Diapers	Yes
168	B0430171A 040309HCC1493	3/7/2004	11	M	The victim and some friends made a campfire in a wooded area. They doused a sock with gasoline and lit it on fire. A friend threw some gas onto the fire which contacted victim and he ignited.	Shirt	No

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
169	B0430179A 040317HCC1507	3/9/2004	7	M	Gas was splashed on the victim's pants by another child. He was attempting to stomp out fire, but pants caught on fire.	Jeans	No
170	B0430186A 040319HCC3215	3/10/2004	11, 11	M, M	Some boys tried to light gunpowder with a lit stick, the gunpowder exploded and flashed into the face of V1 blowing his cap off and lighting his sweatshirt, V2's pants caught fire.	V1: Sweatshirt, V2: Pants	No
171	B0430180A 040317HCC1506	3/12/2004	13	M	The victim soaked a tennis ball and leaves with gasoline/oil mixture. He lit the tennis ball, then kicked it near the leaves. The nearby gas tank caught fire and flashed and caught victim's clothing on fire, which had some gas/oil on it also.	Sweatshirt, Jeans	No
172	B0430185A 040317HCC1515	3/14/2004	3	M	The victim lit paper from the stove that was left on with food on it to cook. His sister came in and saw his shirt was on fire.	Shirt	No
173	B0440209A 040413HAA1603	3/22/2004	6	F	The victim got too close to a natural gas space heater and her dress caught fire.	Dress	Yes
174	B0430187A 040330HCC1562	3/24/2004	3	M	The victim's family was outside working on car's gas tank when something sparked and there was an explosion. The child was nearby and his clothing caught fire.	T-shirt, Sweatpants	No
175	040518HCC2525 B0450240A	3/26/2004	13	M	The victim was playing with gasoline and his pant leg caught fire. The flame went up his pants.	Pants	No
176	040329CCN0462	3/26/2004	4	F	The victim was throwing either her blanket or stuffed animal in the air and it landed on top of the hot halogen lamp bulb. The item then fell back into the chair the child was sitting in. The material scorched her hair, her foot and a section of the pajamas, but they did not fully ignite. The fire spread to an apartment fire.	Nightgown	Yes
177	B0440210A 040413HCC1606	3/27/2004	7	M	The victim was playing with his mother's lighter and caught his shirt on fire.	Dress shirt	No

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
178	B0440202A 040407HCC2443	3/28/2004	11	M	The victim was with friends in an alley behind a house trying to light paper on fire. A friend went to throw gas on the paper and somehow the victim was ignited.	Shirt, Shirt, Jeans	Unknown
179	B0440207A 040409HCC2458	4/3/2004	11	M	The victim was building a campfire and spilled gas on his jeans. The victim tried to extinguish the fire by stomping on it and caught his jeans on fire.	Jeans	No
180	B0440204A 040408HCC3253	4/4/2004	14	M	The victim and his family were sitting around a warming fire on the porch of a home. The adults went inside and the victim and friend poured lighter fluid on the fire. Some fluid got on the victim and his side caught fire. Victim is blind.	Flannel lined shirt/jacket	No
181	B0440215A 040414HCC2465	4/4/2004	8	M	A fire started in the victim's bedroom. Dad had to get the victim out from outside through a window. The trailer burned completely. The boy was burned during the trailer fire.	T-shirt, Jeans	Yes
182	040517HCC2521 B0450241A	4/7/2004	3	F	The victim's grandmother started a fire in a 22 gallon barrel to burn branches, using gasoline. Later, when fire was thought to be out, the victim picked up a gas can, spilled some on herself and reached over fire barrel, igniting clothing.	Shirt	No
183	B0440214A 040413HCC1611	4/7/2004	9	M	The victim and two other boys were burning trash outside. The victim stepped close to the fire when perceived to have died down. A friend squirted gasoline on the fire and the victim caught fire.	Shirt, Shorts	No
184	B0440213A 040413HCC1610	4/8/2004	10	M	The victim was outside and a neighborhood kid kicked a gas can by an old fire pit that was smoldering and the fire flashed.	Shirt, Shorts	No
185	B0440216A 040414HCC2464	4/8/2004	11	M	The victim decided to make fire with sticks and gasoline in a barn. The gasoline can exploded and caught the victim's pants and the barn on fire.	Jeans	No

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
186	B0440218A 040416HCC1625	4/9/2004	8	M	The stove was turned on to warm a pizza. While leaning over the gas range, the victim turned on the burner, igniting his shirt.	Shirt	No
187	B0440211A 040413HCC1604	4/10/2004	10	M	The victim states a brother was putting gasoline onto a trash fire. Some gas accidentally got onto the victim's clothing when his brother put the gas can down and the victim's clothing caught fire.	T-Shirt, Jogging suit	No
188	B0440212A 040413HCC1612	4/11/2004	4	M	The victim held a plastic rubber ball over a candle. The ball started to smolder and the victim dropped the ball onto himself. The clothing melted and smoldered.	Long sleeve shirt	No
189	B0440217A 040414HAA2463	4/11/2004	7	M	The victim and a sibling were sleeping on the floor and a candle was lit on nightstand. Someone kicked the nightstand and the candle fell onto the victim. The shirt caught fire.	T-shirt	Yes
190	040517HCC2520 B0450242A	4/14/2004	11	M	The victim was lighting a fire with wood and gasoline. The fire shot back at him and lit his jeans on fire.	Jeans	No
191	B0440205A 040408HCC1595	4/16/2004	11	M	The victim started a fire on the ground using a mixture of gasoline and oil. Gasoline spilled on his pants and they ignited.	Cargo Pants	Unknown
192	B0440220A 040426HCC2481	4/19/2004	3	F	The victim took a lighter off of an entertainment center and went into the bathroom and shut the door. She somehow ignited her shirt.	Long sleeve shirt	No
193	B0440221A 040430HCC2488	4/20/2004	3	M	The victim was hiding from his brother under a blanket. The brother got a lighter and lit the blanket on fire. The shorts had melted blanket on them.	Shorts	Yes
194	B0460251A 040604HAA1752	4/23/2004	13	M	Boys were working on a go-cart and the victim got gasoline on his shirt. Later in the day, one boy lit a cigarette and the shirt caught fire.	Undershirt, Shirt	No

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
195	B0440222A 040430HCC2483	4/24/2004	8	M	There was a trash fire from the previous day. The victim threw a paint can in the fire area and it exploded.	Shirt	No
196	040511HCC1680 B0450239A	4/25/2004	14	F	The victim was in a bedroom playing with a cigarette lighter when she caught her shirt on fire.	Shirt, Bra	No
197	B0440224A 040430HCC1642	4/25/2004	12	M	The victim's grandmother was burning leaves and as she was raking them, the victim was closer to the fire than she thought and his pants ignited.	Pants	No
198	040510HCC3298 B0450237A	4/30/2004	12	F	The victim was with her family at a Japanese restaurant. The chef lit alcohol on fire and the fumes ignited, somehow igniting the victim. Mostly her face was burned, but also shoulder.	Shirt	No
199	040510HCC3297 B0450238A	5/3/2004	6	M	The victim and his brother lit a puddle of gasoline. The victim was standing near the gasoline and his shorts caught fire.	Shorts	No
200	040517HCC2519 B0450246A	5/12/2004	6	M	The victim's aunt was making hot dogs on the stove. The victim reached across the stove and his shirt contacted a flame.	Shirt	No
201	040526HAA1699 B0450248A	5/15/2004	5	F	The victim was alone in the room and was playing with the flame of a candle. Her shirt ignited.	T-shirt	No
202	040524HAA2532 B0450247A	5/15/2004	13	M	The victim was standing near a campfire inside of a tire rim and an ember jumped out and contacted his pant leg.	Flannel pants	Yes
203	B0460254A 040608HCC2559	5/21/2004	7	F	The victim and friends were playing outside unsupervised. The victim got lighter fluid on her clothing and another child lit the shirt with a cigarette lighter.	T-shirt	Unknown
204	B0460255A 040608HCC2558	5/22/2004	5	F	The victim got a firework from a babysitter, went into father's car and lit the firework with a cigarette lighter. She caught her shirt on fire.	Shirt	No
205	B0460250A 040604HAA1753	5/23/2004	7	M	The victim was playing with a cigarette lighter and set his clothing and then the house on fire.	Shirt, Shorts	Yes

Count	Document Number	Incident Date	Age	Sex	Summary	Specific Clothing Worn	Worn for Sleeping
206	B0460256A 040610HAA2571	6/6/2004	4	F	Wind blew a spark or flame from a fire pit onto the victim's pants and ignited them.	Pants	No
207	B0460257A 040610HAA2572	6/7/2004	5	F	Two brothers had started a brush fire. One of the boys threw gasoline on fire and it flashed out. The two brothers ran away, but the victim was still there and was burned.	Shirt, Shorts	No
208	B0440208A 040414HCC2462	11/19/2004	12	M	The victim and a sibling were near a wood stove. The fire was smoldering and the victim poured gasoline on the smoldering fire. It flared and caught his clothing on fire. The sleepwear was size 14 and loose fitting	Pajamas Bottoms, Cuffs of top	Yes
209	B0420148A 040301HCC3191	1/15/036	3	M	The victim lit his shirt on fire while playing with lighter.	Shirt	No

Appendix D continued.

		Activity of Victim Preceding Incident												
		Playing	Close to Source	Started or Stoking Source	Accidental Contact w/ Source	Another Person Ignited Victim	Ignition Source fell on Victim	Trying to Put Out Fire	Victim Fell on Ignition Source	Spilled Flammable Liquid	Using Ignition Source	Other	Unknown	Total
Ignition Source	Product set on fire	2	0	1	0	0	0	0	0	0	0	0	0	3
	Cigarette	0	0	0	0	0	2	0	0	0	0	0	0	2
	Halogen Lamp	0	0	0	1	0	0	0	0	0	0	1	0	2
	Other	1	1	0	0	1	1	0	0	0	1	3	0	8
	Unknown	4	2	0	0	0	0	0	0	0	0	0	3	9
	Total	57	53	26	24	8	7	7	6	4	3	8	6	209

Appendix E

This appendix contains data for the 209 in-scope incidents reported through the National Burn Center Reporting System from March 2003 through June 10, 2004. The table shows the ages of the children involved in the incidents with the activities of the children preceding the incident.

		Activity of Victim Preceding Incident												
		Playing	Close to Source	Started or Stoking Source	Accident -al Contact w/ Source	Another Person Ignited Victim	Ignition Source fell on Victim	Trying to Put Out Fire	Victim Fell on Ignition Source	Spilled Flamm-able Liquid	Using Ignition Source	Other	Un-known	Total
Age of Victim	<1	0	4	0	0	0	0	0	0	0	0	0	0	4
	1	0	1	0	1	0	0	0	1	0	0	0	0	3
	2	0	3	0	1	0	0	0	1	1	0	0	1	7
	3	3	5	0	1	1	1	0	2	1	0	1	0	15
	4	8	4	0	1	0	0	0	2	0	1	1	1	18
	5	8	1	1	3	0	0	0	0	0	1	0	0	14
	6	4	1	0	2	0	0	1	0	0	0	1	0	9
	7	3	5	2	4	3	1	0	0	0	1	2	0	21
	8	3	3	1	3	0	1	0	0	0	0	0	0	11
	9	5	4	0	0	0	0	0	0	0	0	0	0	9
	10	6	6	1	3	2	0	1	0	0	0	0	0	19
	11	7	6	7	1	0	1	2	0	1	0	1	0	26
	12	2	4	4	3	0	0	1	0	0	0	0	0	14
	13	5	5	6	1	2	0	1	0	0	0	1	4	25
	14	6	2	4	0	0	3	1	0	1	0	1	0	18
Total		60	54	26	24	8	7	7	6	0	3	8	6	213

Appendix F continued.

		Activity of Victim Preceding Incident												
		Playing	Close to Source	Started or Stoking Source	Accidental Contact w/ Source	Another Person Ignited Victim	Ignition Source fell on Victim	Trying to Put Out Fire	Victim Fell on Ignition Source	Spilled Flammable Liquid	Using Ignition Source	Other	Unknown	Total
Ignition Source	Product set on fire	2	0	1	0	0	0	0	0	0	0	0	0	3
	Cigarette	0	0	0	0	0	2	0	0	0	0	0	0	2
	Halogen Lamp	0	0	0	1	0	0	0	0	0	0	0	0	1
	Other	1	1	0	0	0	1	0	0	0	1	3	0	7
	Unknown	3	2	0	0	0	0	0	0	0	0	0	2	7
	Total	48	31	18	14	5	6	5	3	4	2	5	5	146